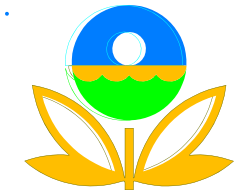
Nebraska Department of Environmental Quality

Air Program Review

Final Report

September 2003



Conducted by the

U.S. Environmental Protection Agency

Region 7

901 N. 5th Street

Kansas City, Kansas 66101

Chapter I. Air Program and Development Review

Chapter II. Air Permitting and Compliance Review

Chapter III. Nebraska Ambient Air Monitoring Program Technical System Audit

Chapter I. Air Program and Development Review

Region 7 staff from the Air Planning and Development Branch (APDB) conducted an on-site visit at the NDEQ office in Lincoln on April 22 and 23, 2003, to evaluate various planning functions of the Air Quality Division (AQD). Program planning and management information was gathered by the EPA APDB Branch Chief and the EPA Nebraska coordinator during interviews with the AQD Administrator and staff. EPA staff from the emission inventory and modeling programs were also on-site to gather information in those program areas. The Small Business Assistance Program information was gathered through a telephone interview.

An informal copy of the draft report was provide the NDEQ to review for clarification, errors, or misstatements, on July 2, 2003. A response was provided by NDEQ on August 27, 2003. Appropriate revisions were made to the draft report based on the information provided by NDEQ.

Section I

Organization

The organizational structure of the NDEQ is;

Nebraska Department of Environmental Quality

- Administration
  - Management Services Division
  - Legal Services Division
  - Environmental Assistance Division
- Programs
  - Air Quality Division
  - Waste Management Division
  - Water Quality Division
  - Low Level Radioactive Waste Program
  - Field Office Section

(See Attachment A)

The Air Quality Division is organized as follows:

- Permitting Section
  - Construction Permit Team
  - Operating Permit Team
- Compliance Section
- Program Planning & Development Team

There are presently 27 positions assigned to the AQD, with three of these assigned to the Planning team. In April, there were three vacancies with one being from the Planning team.

In addition to the Headquarters' staff in Lincoln, there are six regional offices geographically dispersed throughout the State. These offices do not participate substantially in planning activities but respond to citizens complaints, support ambient monitoring activities, and conduct compliance inspections as requested by the program. A map showing the location of these offices is attached (Attachment B). There are also two local agency air programs; located in Omaha and Lincoln-Lancaster County. These programs have their own area-specific rules that supplement State rules applicable in their area. A third local agency, the Douglas County Health Department, is responsible for operating the air monitoring network in Omaha and surrounding Douglas County.

The AQD does not itself adopt air pollution rules. This function is maintained by the Nebraska Environmental Quality Council (EQC). The EQC consists of 16 members who are appointed by the Governor. Each member's term is for four years but they may be reappointed. The EQC conducts public hearings, takes testimony on proposed rulemakings, and adopts final rules. The EQC meets quarterly, usually in Lincoln, but sometimes at an out-state location. A list of the current EQC members is attached (Attachment C)..

Section II

Regulatory Process

The Program Planning and Development Team is responsible for drafting new or revised rules and taking them through the rulemaking process. A *Regulation Development Manual* has been prepared which contains detailed information on the internal and external process required to adopt rules (Attachment D). This includes both administrative and legal requirements. It generally takes six to nine months from the time a rulemaking action is started internally until it is adopted by the EQC. Once adopted, the rule must be sent to the Attorney General's office for review, then forwarded to the Governor's office for signature. The rule is not final until signed by the Governor. Once signed, the rule is filed with the Secretary of State's office and it becomes effective five days later. There are no time restrictions on review by the Attorney General' office or the Governor's office, so even though a rule may have been adopted by the EQC, there is no firm date by which the rule will become effective.

At the start of each rulemaking action, the NDEQ staff prepares a tracking calendar (Attachment E) which sets out milestones and time lines for the various steps of the rulemaking process. A 30-day public comment period must be provided for rule revisions. The comment period closes when the rule is taken before the EQC for approval. At this meeting, the NDEQ staff summarizes the comments received and may recommend minor revisions. Based on a previous State court ruling, only non-substantive revisions may be made to the proposed rule. Thus, the NDEQ must restart the administrative rule making process if significant public comments are received. In effect, the EQC has to do an up or down vote on the rule as proposed.

This limitation can result in the EQC not approving the rule if the public comments point out a serious defect in the rule. Another adverse result of this limitation is that significant EPA comments provided during the public comment period derail the rulemaking process. NDEQ's options at this stage are only two; NDEQ can restart the process, or submit rules which the EPA cannot fully approve.

To try and address this problem, the NDEQ staff attempts to gain input from stakeholders on early drafts of the proposed rule. This way major comments can be addressed and incorporated before the final version of the proposed rule is presented for public comment. However, this is an informal process and it has not always been clear how much time is available to provide comments. We recommend that a block of time (30 days) be identified for these early comments and that all stakeholders be provided the opportunity to submit early comments within this time period. This may extend the overall rulemaking process, but it would also hopefully result in fewer adverse comments and approvability issues being raised during the public comment period.

With respect to internal review, the air program manager plans to establish a more formal procedure for getting internal staff input on potential rule revisions. This will ensure that permitting and compliance program interest are factored into the draft rule before it is released for stakeholder or public review.

Summary: The program has an organized and systemic method for rulemaking. Rules are updated in a timely fashion and kept current with EPA requirements. A procedure for receiving input on draft revisions, before rules are published for public comment, should be developed.

Section III

Grant and Workplan Management

The NDEQ has entered into a Performance Partnership Agreement (PPA) and Performance Partnership Grant (PPG) with EPA Region 7. The PPA and PPG includes the air, RCRA, and water programs. The air program is partially funded with CAA section 105 grant funds. The State meets its 40 percent match requirement. Other significant financial support comes from Title V emission fees which support activities not fundable under CAA section 105. The program recently increased its fee rate from $29/ton to $50/ton. A detailed financial analysis of the grant award was not a part of this program review.

The air program work plan is based on a two-year project period to be consistent with the PPA. At the end of the first year, revisions are mutually agreed to as necessary to address any changes in either the NDEQ or the EPA priorities. The NDEQ staff provides timely semiannual workplan progress reports on workplan commitments.

There are two local agencies which implement their own air programs: Omaha and Lincoln-Lancaster County. The NDEQ has an interagency agreement with each agency which

defines the roles and responsibility of the partnership. The NDEQ also has workplan agreements with each of these agencies. These workplans reflect the priorities that are included in the NDEQ/EPA workplan. The NDEQ also has an agreement with the Douglas County Health Department which has responsibility for the ambient air monitoring network in the Omaha-Douglas County area.

The NDEQ plans to involve the local agencies earlier in the workplan process in the future. At present, the Omaha workplan is lacking in detail in some areas. For example, there are no commitments for emission inventory activities.

The NDEQ audits each agency on a rotating, annual, basis. A copy of the most recent workplans, audits, and agreements are included in the EPA Program Review file. The NDEQ meets twice each year with each agency for coordination and oversight purposes. It also has routine, bimonthly conference calls to discuss inspection and enforcement activities. However, the Omaha air program rarely participates in these calls.

Federal section 105 funds are passed through the NDEQ to the local agencies. These agencies provide their own matching funds in support of the Federal grant to the State. The local agencies do not receive any State funds.

Summary: The program effectively tracks workplan activities and provides timely reports to the EPA. This program provides effective direction, oversight, and communication with the local agencies.

Section IV

Training and Outreach

Although the AQD does not have a formal training policy or individual training plans, staff are encouraged to take advantage of training opportunities to the extent that time and budget allows.

The NDEQ has a connection to the Air Pollution Training Institute satellite downlink in its office building which makes it convenient for staff to attend these presentations. They also participate in webcast presentations when provided by the Air and Waste Management Association or other commercial sources. Staff routinely attend the semiannual compliance/permitting workshops sponsored by Region 7. The EPA recently contracted and hosted in the Region 7 office a workshop on the secondary aluminum MACT, which AQD staff attended. The AQD expressed appreciation for this type of training which brings professional presenters to the Region and minimizes travel cost. Additional courses of this type are desired. The AQD maintains an in-house intranet link called the *Air Chalkboard* on which information is posted and exchanged by the staff. This allows internal discussion by the staff on permitting issues, for example. Any Federal Register actions which are relevant to the staff or Nebraska sources are also announced here.

The AQD maintains as a planning document an *Air Division Outreach Plan* which is updated annually. This document describes the strategy, outreach goals, audience, implementation activities, and resources for the program. They have also developed a *Sector Assistance Priorities-Air Quality* document which identifies the industrial sectors on which they plan to focus compliance assistance efforts and outreach in the future.

The AQD provides considerable training and outreach to the regulated community, working in conjunction with the Small Business Assistance Program, the NDEQ Compliance Assistance Team, and other State agencies. At least one-half workyear is devoted to outreach and education efforts. The AQD staff conducts semiannual workshops at four Statewide locations for the regulated community. Other specialized workshops are developed and presented as needed. A workshop and booklet was prepared by the AQD on the ethanol industry. The booklet, *Air Quality and Ethanol Production*, covers the ethanol process, potential emission points, air quality issues, and permitting and compliance issues.

Other publications include an *Air Quality Compliance Calendar*, reissued annually, which has been well received by industry; a general information brochure/poster titled *Breathing Easier, An Overview of Nebraska's Air Quality*; and the annual *Nebraska Air Quality Report*.

Special attention is given to outreach on MACT standards. Sources subject to the standard are identified, fact sheets are developed and mailed out, and training is presented. A MACT notebook, which contains relevant information on each MACT standard, has been developed which is distributed to all the air supervisors, the permitting and compliance staff, the field office staff, and the Environmental Assistance Division,

Considerable time is spent in conjunction with the SBAP responding to small business and citizen inquires on air quality issues of all types. Over 25 fact sheets have been prepared and distributed as needed and at least eight guidance documents developed. All of these information references are available on the NDEQ web site. Additionally, all construction and operating permit application forms are available on the web site.

Summary: The program provides excellent outreach and opportunities for training. The extensive training materials, workshops, and direct contact with regulated sources should enhance the effectiveness of the entire program.

Section V

Emission Inventory

Inventory Planning and Management

Prior to the visit an emissions inventory Quality Assurance Project Plan was created. This plan is currently being reviewed. Once implemented, this document will provide a

complete overview of the emissions inventory program as well as document the quality assurance procedures that will be utilized for each iteration of the inventory. Therefore, all EPA recommendations will be addressed in the comments to the QAPP and will not be repeated here.

The inventory staff consists of one person. Due to the recent release of the Consolidated Emissions Reporting Rule (CERR) the overall inventory workload is expected to increase. Therefore, it is recommended that the NDEQ management investigate the need for increased resources in this area in order to properly fulfill the commitments under the CERR.

Documentation/Data Entry

The documentation of the EIQ records is well maintained and organized. A proper checkout procedure is in place to ensure the document is returned. The personnel are well trained. They were able to locate all of the documents that were requested and were able to do so quickly. All relevant information was documented in a summary sheet preceding the actual EIQs. This made referencing materials much easier and provided documentation about when attachments were included.

Reporting

The 1999 criteria and hazardous pollutant inventory was submitted before the deadline of June 1, 2001. At the time of this submission, the NDEQ was one of a handful of States that submitted in the XML format. This demonstrated a certain level of proficiency in data exchange that most State/locals have not yet achieved.

The NDEQ also met the first reporting deadline under the CERR for Type A sources on June 1, 2003. However, the data were not in the proper NIF2.0 format and were unusable due to a technical problem at the State that occurred prior to submission. The data have since been corrected. For the Statewide 2002 inventory due by June 1, 2004, the State is encouraged to convert and quality assure all data in advance of the reporting deadline in order to ensure the State meets all the reporting requirements by the specified date.

A sample of point source EIQs was compared to emissions in the National Emissions Inventory for the year 1999. Some discrepancies existed. During the interview it was learned that for fee purposes, HAPs that also qualify as VOC are removed from the total VOC. The following paragraph was taken from the EIQ instructions:

List any chemicals manufactured or used which appear on the enclosed list of 188 hazardous air pollutants (HAP) covered by the Clean Air Act Amendment. NOTE: If a chemical is considered to be both a HAP and a VOC, then report it only as a HAP on Form 4.0.

It is understandable that the department avoid double counting when determining emissions fees. However, unless these VOC HAPs are added back into the VOC total when

reporting emissions to the NEI, this category will be underestimated. The total VOC number is important in determining the contributions to $PM_{2.5}$/RH and ozone formation.

Also, the 2002 Emission Inventory Questionnaire (EIQ) sample does not reflect agreement with the CERR. Neither $PM_{2.5}$ or NH_3 are included, The *Federal Register* (see 67 FR 39602, June 10, 2002) states, "States must commence reporting point source emissions of $PM_{2.5}$ and NH_3 on June 1st, 2004, unless that date is less than 60 days after EPA publishes an approved Information Request (ICR) 60 days in advance of June 1, 2004." The *Federal Register* on June 20, 2003 (see 68 FR 36981) states "The approval of this ICR activates the point source reporting requirements for $PM_{2.5}$ and NH_3 found in the Consolidated Emissions Reporting Rule 51.30(e) (67 FR 39602, June 10, 2002) and establishes the applicable reporting deadline. As a result of this action, States must commence reporting $PM_{2.5}$ and NH_3 beginning with the 2002 inventory year with the report due on June 1, 2004."

At the CENRAP Emissions Inventory work group meeting in August 2002, it was agreed by all members that each respective State would ensure that its 2002 EIQ contained all of the required data elements of the CERR before the 2002 mail out. Although it is the responsibility of the states to participate in this stakeholder process, those states not represented at this meeting were contacted by the EI workgroup chair to ensure each state filled out a data gap analysis to address consistency with the CERR. This process was intended to make certain the 2002 base case inventory contained all of the data elements needed to perform the photochemical modeling effort in the next phase of the CENRAP work plan. The NDEQ filled out the data gap analysis but did not address the issue of $PM_{2.5}$ and NH_3 from point sources. Without this information on the EIQ's it is unclear how the NDEQ will conform to the CERR reporting requirements for the date of June 1, 2004. Moreover, the NDEQ inventory for the 2002 base year will be missing critical information needed for the photochemical modeling analysis to be conducted by CENRAP.

Facilities

The current facilities are adequate for preparing the emissions inventory.

Training

The EPA provides updated emissions inventory training annually at the International Emissions Inventory Conference. The NDEQ's staff person has been present each of the last three years. With the proper training and experience, the inventory staff appear to be adequately trained for the task at hand.

Point Sources

Comments to be included in the QAPP.

Area Sources

Comments to be included in the QAPP.

Mobile Sources (On and Off-Road Mobile)

The staff should become familiar with these models as they are continually updated. If the State chooses to allow the EPA to make estimates for its counties for these sources, the proper input data should be obtained for each county and submitted to the EPA for inclusion in the modeling runs.

Biogenic

It is recommended that the State continue to allow the EPA to calculate this category.

Computer Data Accuracy

Data entry personnel are able to check emissions estimates by comparing the throughput on the EIQs with the auto-calculation procedure available for certain Source Characterization Codes. This adds a level of needed quality assurance. The department expressed a need of having a downloadable table that contained updated AP-42 emissions factors to be used in this process. This request has been forwarded to the Emission Factor and Inventory Group.

No specific software management plan exists. However, backup procedures are in place. The backup procedures need to be documented. The only added recommendation is that a total backup of the system be stored offsite.

Summary: EIQ records are well organized and maintained. Data are submitted to EPA data systems ahead of schedule. Total VOCs, including HAPs, should be reported to the NEI. The 2002 inventory should include $PM_{2.5}$ and NH_3. Due to increased requirements of the CERR, we recommend that additional resources be devoted to this activity.

Section VI

Modeling

The NDEQ has a good modeling review program. The NDEQ modeler has excellent knowledge of air quality models and air regulations. His reviews of permit applications are very thorough. He does additional modeling to verify an applicant's analyses.

The review process could be improved by encouraging applicants who plan to submit permit applications to arrange for preapplication meetings so that modeling requirements, as well as other permit requirements, are discussed and a protocol submitted. The modeling protocol

must include the air dispersion model(s), meteorological and geophysical data, and the domain that will be used, as well as the source characteristics, in the air quality impact analyses.

The program review included discussion with the modeling staff person on general modeling and meteorological information that the NDEQ uses and the latest information that the EPA has on new models and/or techniques. In addition to the general overview, several permit applications were reviewed and discussed. These applications were selected because they were identified as sources with predicted concentrations close to the NAAQS. The applications were recednt, or the selection was a result of discussions with EPA APCO personnel.

We are concerned that the source characteristics that were modeled were not always included in the permit (e.g., some operations were only modeled for certain hours, but there was nothing in the permit that limited these operations to the hours that were modeled). The construction permit for the Martin Marietta or City Wide Rock and Excavating facility near Springfield, Nebraska, characterized source operations at 14 hours per day (06:00 a.m. - 08:00 p.m.). The permit did not limit the operation of these sources to the hours that were modeled. This is important because even with constant emissions, ground-level concentrations can vary greatly depending on the meteorological conditions as well as the source characteristics. Frequently the highest concentrations occur during the night-time hours.

For the modeling of the KAAPA Ethanol plant near Axtel, Nebraska, there are predicted PM_{10} violations on the company's property. This is ambient air unless the public is denied access. The permit says that a security plan will be developed, but the permit should be specific in how the public will be denied access to this area and that these measures must be enforceable.

A potential problem exists near the Cornhusker Energy facility near Lexington, Nebraska. The modeling indicates that the 24-hour PM_{10} NAAQS will be violated near the IBP facility located about a kilometer southwest of the Cornhusker facility. Emissions from the Cornhusker facility do not significantly contribute to the predicted 24-hour PM_{10} concentration of about 445 micrograms per cubic meter. If the emissions from the IBP facility are accurate, then SIP action should be taken to decrease its emissions. Also, emissions from traffic on the haul roads at the Cornhusker facility were modeled as varying according the traffic activity (i.e., 20 percent at night and 80 percent during the day). There were no restrictions in the permit that limited traffic on the haul roads according to the time of day. The restrictions should be in the permit.

Summary: Modeling reviews are thorough and complete. The staff is knowledgeable and uses current EPA guideline models. We recommend that permit applicants submit a modeling protocol and have a preapplication meeting with the modeling and permitting staff to ensure applicant modeling is performed correctly. Subsequently, modeling and permitting staff should coordinate to ensure that source characteristics that were modeled are included in the final permit.

Section VII

SMALL BUSINESS ASSISTANCE PROGRAM (SBAP)

Section 507(a) of the Clean Air Act requires each State to administer a SBAP that provides small, stationary source businesses, with technical and environmental compliance assistance.

STRUCTURE OF THE PROGRAM:

The Federal Register Notice to finalize the State Implementation Plan for the SBAP was finalized in 1994. In the State of Nebraska this program is called the Small Business and Public Assistance (SBPA) program and includes the Small Business Compliance Advisory Panel (CAP), the Ombudsman (who in the State of Nebraska is referred to as the Public Advocate), and the technical assistance program.

In addition to the three components, a One-Stop Permit Assistance Program was established to serve as a clearinghouse for information related to the Department's various permitting processes. The Department also has a staff person with compliance assistance responsibilities housed in the Air Quality and Waste Management Divisions, and all Department staff members provide technical and procedural assistance to the regulated community and the public in various forms.

This portion of the program review was completed by telephone interview and e-mail with NDEQ responding to the following list of questions.

1. Ombudsman and Compliance Advisory Panel Appointment and Duties

Are the Ombudsman and Compliance Advisory Panel (CAP) Appointments positions filled in accordance with Section 507(a) of the CAA?

Program Response: Yes. Attached is the roster of the current membership.

Findings: Acceptable.

Does the Ombudsman have direct access to State agencies and officials to relay concerns of small businesses?

Program Response: Yes.

Findings: Acceptable.

Does the Ombudsman have authority to access and obtain data from State agencies?

Program Response: *The SBPA coordinator regularly works with other State agencies and readily receives requested information.*

Findings: Acceptable.

Have sufficient resources been provided to successfully fulfill Ombudsman/SBPA responsibilities?

Program Response: *Yes*

Findings: Acceptable.

Has the CAP rendered any opinions on the effectiveness of the SPBA effectiveness?

Program Response: *Yes. The CAP submits an annual report to the Governor that addresses the effectiveness of the SBPA program.*

Findings: *A copy of all the annual reports are available on the State web site at: www.deq.state.ne.us. A copy of the 2002 report is attached.*

Have any reports been submitted to the EPA's Small Business Ombudsman?

Program Response: *Annual reports have been submitted since 1993.*

Findings: Same as above.

2. What outreach techniques are currently used by the SPBA (seminars, Internet, etc.)?

Program Response: *The SBPA program uses several outreach techniques to include workshops, mailings, internet, speaking engagements at conferences, and phone. An integral part of our outreach is through on-site compliance and pollution prevention assistance. In 2002, 42 on-site visits were conducted, the majority of which were multimedia in nature. Probably the most effective mechanism for increasing awareness of the assistance program has been through the Department's regulatory staff and their frequent contacts with businesses. The regulatory staff refers businesses to the assistance program when the staff finds that a given business needs help. Web page: www.deq.state.ne.us, toll free number 877-253-2603.*

Findings: Acceptable.

Does the SPBA coordinate with other programs, State, etc.?

Program Response: *The SBPA coordinator coordinates with all the programs within the Department to include assistance providers in the air quality and waste management programs, as well as other State agencies such as the Nebraska Health and Human Services System, Department of Agriculture, Nebraska Department of Economic Development (DED), Ethanol Board, Natural Resource Districts, State Fire Marshall, and Department of Labor. In addition, the SBPA coordinator regular works with other State counterparts, city and county agencies, National Resource Conservation System, several EPA Region 7 and Headquarter' programs, and several nongovernment organizations such as the Pollution Prevention Regional Information Center, Nebraska Groundwater Foundation, Nebraska Municipal Power Pool, and University of Nebraska Extension Services. The SBPA coordinator also works with numerous industry and business associations and State Boards.*

Findings: Acceptable.

Describe how well SPBA provides compliance assistance to identify applicable requirements and obtain appropriate permits.

Program Response: *Over time, the SBPA coordinator has increased the comprehensiveness of the assistance provided to those who may need permits. Attached is a brochure developed to increase awareness of different permit issues, and the Department is currently drafting a comprehensive permitting guidance document. Through working with DED and other economic development organizations, the SBPA coordinator is made aware of new and expanding businesses and is then able to contact the business and ensure they know what permits they may be required to obtain.*

Findings: Acceptable.

Has the method been established for ascertaining the eligibility of small businesses to receive assistance under the SBPA?

Program Response: *If a business wishes to do business in Nebraska, the SBPA program will assist them to the extent of the resources available.*

Findings: Acceptable.

What mechanism exists to exclude sources with sufficient financial and technical resources to meet their obligations?

Program Response: *No specific mechanism, but in general those who seek extensive assistance do not have the financial and technical resources to meet their obligations. At a minimum, larger businesses are referred to the numerous Fact Sheets, Guidance Documents, and the Directory of Environmental Consultants'& Engineers posted on our website.*

The following information regarding the SBAP is available on the state web site at www.deq.state.ne.us/Publications.

- The Small Business Compliance Advisor Panel
- The SBA 2002 Annual Report to the Governor
- Compliance Assistance Protocol Guidance Document

Summary: The SBAP provides effective, comprehensive, and timely assistance to eligible sources. Numerous outreach activities and compliance assistance visits are provided.

Section IX [To be included in final report.]

Attachments

Attachment A	Organization and Personnel Chart
Attachment B	Map of Regional Offices
Attachment C	Environmental Quality Council Members
Attachment D	Regulation Development Manual
Attachment E	Rule Tracking Calendar

Additional documents, which are included in the Program Review file, but were not included as attachments to this report because of their volume are:

- Local Agency (Lincoln-Lancaster Co., Omaha, and Douglas Co.) Documents
  - FY02-03 Work Plans
  - Grant Audit Reports
  - State-Local Contract
- Air Division Outreach Plan
- Air Quality Sector Assistance Priorities
- Air Quality and Ethanol Production
- Air Quality Compliance Calendar - 2003
- Breathing Easier - An Overview of Nebraska's Air Quality

These documents are available upon request from either EPA, Region 7, or NDEQ.

Chapter II. Air Permitting and Compliance Review

- Section I. Introduction
- Section II Overview of the Nebraska Enforcement Program
- Section III Permit Program Review
- Section IV Title V Fee Reveiw
- Section V Overview of the Nebraska Air Toxic Program

Chapter II. Air Permitting and Compliance Review

SECTION I - INTRODUCTION

Purpose of the Review

The Region VII Environmental Protection Agency (EPA) conducted a review of the Nebraska Department of Environmental Quality (NDEQ) air compliance and enforcement, permitting, Title V Fee and MACT programs on February 24-26, 2003. The review was conducted to fulfill a regional office commitment with EPA's Headquarters to perform an annual comprehensive review of at least one state or local agency compliance program and in part to satisfy EPA Region 7's policy on periodic review of state and local programs.

The purpose of the compliance review was to assure that violations are being identified by NDEQ, that high priority violators are being reported to the EPA Region VII, and that timely and appropriate enforcement actions are taken on the violations. The review also included an overall assessment of the air enforcement program.

The overall scope of the permit file review focused on 1) synthetic minor permitting, 2) New Source Performance Standards (NSPS) , National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Achievable Control Technology (MACT) determinations, 3) establishment of enforceable permit conditions, and 4) the interaction between the Title V and the New Source Review (NSR) programs. The intent of the permitting programs review was to identify any major program deficiencies if they existed, to identify commendable practices and to make recommendations on how to improve the programs. Specific source permits were reviewed to identify any instances or patterns of questionable permitting procedures.

Because of Region 7's national commitment to evaluate all major source preconstruction permits prior to issuance, the team chose not to evaluate the Prevention of Significant Deterioration of Air Quality (PSD) program during the on-site program review. The team also chose not to concentrate on specific Title V operating permits since Region 7 has an opportunity to request and comment on these proposed permits in real time. Instead, the review team focused on the interaction between NSR permits and Title V to assure that preconstruction permit terms were properly being incorporated into the Title V permits and synthetic minor permits used to keep sources out of Title V and major

A list of Program Review Criteria questions in the areas of enforcement and permitting were submitted to NDEQ for response prior to the program visit. Angela Catalano met with Todd Ellis, Compliance Unit Supervisor, on February 25 to clarify and expand on answers made by Nebraska. Ward Burns and Jon Knodel met with Clark Smith, Permitting Section Supervisor, and Shelley Kaderly, Air Administrator, to discuss the permitting questions in order to learn more about NDEQ's permit program.

Review Staff

The EPA review team included Angela Catalano, Kevin Barthol, and Mike Bronoski, Richard Tripp, Ward Burns, Jon Knodel, Daniel Rodriguez, Gary Schlicht, and Harriett Jones, representatives of the Air Permitting and Compliance Branch.

Methodology of Review

Meeting Preparation

Prior to meeting with the Nebraska, several elements were developed to assist in the review. NDEQ was provided a list prior to the review of 80 compliance files and 20 permitting files to allow the State time to gather the file information in one central location. Additional enforcement and permit files were requested during the review. A total of 62 compliance files and 37 permit source files were reviewed during the audit. The files were randomly selected from the areas of jurisdiction of NDEQ. Facilities in Omaha and Lincoln jurisdictions were not part of this review. Of the sources selected, half were facilities that were classified as major sources which were subject to significant Clean Air Act requirements such as Title V, NSPS, NESHAP, or MACT. The other half were facilities classified as Synthetic Minor (SM).

The AFS database was used to pull retrievals to assist in the selection of sources for file review.

Entrance Meeting

A kick-off meeting with all EPA and NDEQ personnel was held on February 24, 2003. Attendees included Jay Ringenberg, Shelley Kaderly, Todd Ellis, Clark Smith and Tom Lamberson of NDEQ. EPA informed NDEQ that after reviewing their response to the compliance and enforcement criteria questions and the permit criteria questions there was additional information needed.

File Review

To assist with the air compliance file review, a file review checklist was developed by the EPA. This checklist was filled out for each file reviewed. A copy of the checklist is included in Appendix EPA's focus was the time period starting with calendar year 2000 through the date of the review. Pertinent documents which were developed outside of this time frame, but still had a current regulatory impact on the source, were included in the review as well. If relevant information was found during the review, copies of this material were made and attached to the checklist.

Exit Meeting

At the completion of the file review, an exit meeting was held on February 26, 2003, with EPA and NDEQ management to discuss the preliminary findings of the compliance, Title V fees and MACT program. An exit meeting to discuss the permit program findings was held on February 27, 2003 The exit meeting was attended by Tom Lamberson, Shelley Kaderly and Todd Ellis, Thuy Le, and William Lund. Donald Toensing, Chief, Air Permitting and Compliance Branch participated in both meetings via conference call. The highlights of the more significant issues were discussed along with other miscellaneous feedback and comments.

SECTION II - Nebraska Air Compliance and Enforcement Program Review

Overview of Nebraska Enforcement Program

Compliance Staff and Duties

The Compliance Section is one of three organization units found in the Air Quality Division. An Organizational Chart for NDEQ is found in Appendix 5. The Compliance Section consists of a Section Supervisor and three positions for inspectors, two for ambient monitoring, one for emissions inventory, one for stack testing, 0.5 for asbestos, 0.5 for continuous emissions monitoring, and one support staff. Currently there is one vacancy. The Compliance Section Supervisor position was filled in August, 2002, with an individual who has 15 years of air compliance experience. Staff have a range of experience from 1-10 years. The Field Office personnel are managed from the Field Office Section. Three individuals in the field offices provide air support as well as multi-media support.

Inspection Procedures

The Air Compliance Section is responsible for carrying out inspection and compliance activities. The Air Compliance Section Supervisor identifies the inspection schedule for a two year period in the Air Quality Compliance Monitoring and Inspection Schedule (CMS). A full compliance evaluation is conducted at a minimum of once every two year at all Title V major sources and once every five years at synthetic minor sources that emit or have the potential to emit at or above 80 percent of the Title V major source threshold. NDEQ does not create a special category of synthetic minor sources that emit or have the potential to emit at 80% of the major source threshold. NDEQ considers those Class II's that have not been granted Low Emitter status, to be on the five year inspection schedule.

Typically, most NDEQ site visits occur as a result of routine, program-specific, compliance inspections. These can involve extensive advance preparation, including review of program protocols, applicable statutory and regulatory requirements, facility permit, files, documents, or other relevant information. If the inspection has documented a violation, a Letter of Warning (LOW) or Notice of Violations (NOV) is sent to the owner, operator, or registered agent, in charge of the violating facility. The inspection reports have greatly improved since EPA's last visit in 1997. However, additional information regarding applicable requirements should be prominently shown in the report. Copies of reports from Iowa and Kansas were discussed as examples of well documented inspection reports.

Enforcement Procedures

The Air Compliance Section may discover violations in a variety of ways, including, but not limited to compliance inspections, complaint investigations, and referral from other law enforcement officials, follow-up inspections, and reviews of submitted documents. Once

violations have been detected, they are documented in an inspection report or memorandum as soon as possible while the facts are still fresh. When violations do occur, the NDEQ may seek a voluntary return to compliance through informal means or seek formal enforcement by referring the matter to the Legal Division. Depending on the type of violations, one or more of the following actions and enforcement mechanisms may be pursued:

Voluntary Compliance
Letters of Warning
Notice of Violation
Permit Denial, Revocation, or Modification
Administrative Order
Consent Orders, Agreement, Stipulations
Injunctive Relief
Referral to EPA
Joint State/EPA Enforcement

All Major, Synthetic Minor (SM), National Source Performance Standards (NSPS), and MACT sources which are issued an NOV or LOW are copied to EPA. If a decision is made to pursue a formal enforcement action, the case is referred to the Legal Services Division for further action. The Air Compliance Section has very little input in the case once it is referred to the Legal Services Division. Even the penalty computation worksheet is completed by the Legal Services Division staff. We would recommend that interaction and coordination between the Air Compliance Section and the Legal Services Division be increased significantly. .

NDEQ Field Offices

In April of 1973, the NDEQ established a regional field office in North Platte, Nebraska. The office serves the citizens in the western half of the state. Another field office was opened in Chadron, Nebraska in 1983. Due to the success of these offices in effectively responding to the citizens and monitoring the regulated community, the NDEQ opened additional field offices in Holdrege, Omaha, Norfolk and Scottsbluff in 2000. The addition of these new offices is intended to provide the public better access to NDEQ personnel. By having personnel in the area, the NDEQ can be timelier in their responses to the needs of the public. A copy of the NDEQ field components is attached as Appendix 6. The creation of these additional field offices was seen as an enhancement to compliance activities.

Coordination with Local Agencies

Nebraska has two local agencies; the Lincoln/Lancaster County Health Department and the City of Omaha that also manage air compliance activities. The local agencies have their own Title V authority. The local agencies work autonomously from NDEQ, but they coordinate with each other. The local agencies have their own inspection and enforcement procedures. NDEQ

performed an audit of the local agencies last year and provided copies of the reports of their findings.

Summary of Findings

General Findings

The most significant areas of improvement communicated to NDEQ at the closeout meeting on February 26, 2003 were:

1. Coordination betwen Permit and Compliance staffs. EPA suggests that the Air Section and the Permit Section coordinate work on permit development.

2. Review of all inspection reports for consistency by compliance supervisor. If it is not feasible for the section supervisor to review all inspection reports, at a minimum, all reports written by new inspectors should be reviewed.

3. 14 violations were found during the file review. Of these violations, EPA has the following comments:

   a. There is not enough detail on applicable requirements in inspection reports. The NDEQ inspection reports lack a specific listing for applicable requirements. In reviewing the reports, it was unclear as to what requirements the facility was subject to. We recommend specific applicable requirements be listed clearly in the reports. Use of Title 129 does not give enough detail.

   b. More NOVs should have been issued. In most files reviewed where a violation had been noted; only a LOW was issued. EPA believes that an NOV sends a stronger message and should be used more frequently.

   c. In some cases, enforcement should have gone beyond an NOV and a penalty order or judicial action would have been appropriate.

   d. Construction permit requirements cannot always be enforced because permit modifications are not completed. While EPA understands that permit modifications are considered less a priority than other permit issuance, if modifications are not made, the facility continues to be subject to the current permit. In a number of cases, enforcement actions were dropped because, although there were permit violations, the facility had submitted permit modifications to NDEQ. Three examples include, Chief Ethanol, Hastings, NE, Western Sugar, Scottsbluff, NE and Valmont, Valley, NE. In each case, the facility requested a modification and was told they could, or were under the impression, that they could operate under the modifications. The permits were not modified in a timely manner. Until the permit is modified, the existing permit conditions

are enforceable. NDEQ should not only process the permit modifications in a timely manner, but it should be made clear to the facility that until the permit is modified, they must operate under their existing permit.

e. Test results not always approved or reviewed. Documentation needs to be in the file as to whether a test was approved or reviewed.

f. Coordination with Legal. Coordination and teamwork between the Air Compliance Unit and the Legal Section should be improved.

g. Insure penalties are consistently calculated per the Clean Air Act. Both the Legal Unit and the Air Compliance Section should be involved in civil penalty calculations.

h. Ensure that all NOVs and LOWs for major, SM, NSPS and MACT sources are forwarded to EPA. A few instances were noted where EPA was not copied on some enforcement actions.

i. Variances. In Response 12 of the Program Review Criteria, the NDEQ discussed the provisions to issue variances prior to permit issuance. A facility may request a variance through the permitting program. NDEQ stated that variances from PSD or NSPS/NESHAP requirements are not considered for approval. Recommendations are made to the legal unit, who review and make a recommendation to the Director. A standardized memo is written by the legal staff, which describes the variance request, the impacts of the variance, and recommendations. The Director will only consider a variance if a permit will be issued and it is ready to public notice. Variances are usually effective for one year.

EPA continues to believe that issuance of a variance (regardless of the type of facility or size) from federal law is not valid until approved by EPA , and that variances from federally approved new source permitting requirements are inappropriate. Variances are source-specific revisions to the state implementation plan (SIP) and this interpretation is supported by a decision of the Supreme Court of the United states in Train v. NRDC, 421 U.S. 60 (1975). Variances are a revision to the SIP and must be approved by EPA to be valid under federal law.

Because of specific EPA concerns about variances, the following files were reviewed in which a variance request was submitted to NDEQ. In one instance, NDEQ issued a variance not only to construct, but also to operate prior to the permit issuance.

NDEQ Variance Determinations Reviewed:

Facility	Source ID	Variance Issued	Permit Issuance
Endicott Clay Products	31-095-00001	4/18/00	1/11/01
CW Burdick	31-079-00001	Undetermined	1/8/02
Deshler Mun.	31-169-00022	8/11/00	5/16/01
Pony Express Green House	31-047-00048	9/25/02	11/12/02
Alliance Municipal	31-013-00022	Denied 5/24/01	7/23/01
Union Pacific	31-111-00081	5/7/01	
IBP Inc.	31-047-00047	5/17/00	2/13/01
Excell	31-037-00018	7/20/01	1/8/02
Clean Harbors	31-105-00009	6/14/01	11/7/02
Plains Produce	31-099-00022	12/4/01	8/3/02
Cargill Dow-	31-177-00052	10/26/01	11/6/02
Golden Spread	31-777-00460	6/02	11/02
N. R. Hamm - Construct & Operate	31-133-00001	12/17/01	?
New Holland North America	31-079-00010	4/19/02	?

NDEQ should discontinue the use of variances to begin construction and/or operation prior to permit issuance by revising pertinent state regulations. In the interim, EPA suggests that Nebraska not issue any variances which allow sources to violate PSD, 112(g) or any other federal standard.

Detailed File Review Findings

1. CAMACO Columbus Mfg.
   Columbus, NE
   31-141-00002
   Title V

The file contained a letter from ERG consultants indicating that CAMACO is missing/needs a construction permit. There was no documentation in the permit file that a permit was issued.

2. Williams Pipeline
   Doniphan, NE
   31-079-00030
   Class II- Synthetic Minor permit issued 12/15/97. Low Emitter status granted 6/28/02.

NDEQ issued an LOW for failure to submit an annual compliance certification for 1998. EPA would recommend that something more significant an NOV be issued for this type of violation.

3. David City Power Plant
   David City, NE
   31-023-00019
   Title V

An NDEQ inspection of July 18, 2002 noted that "running twelve consecutive month totals were not being kept." The inspector said he would send out information regarding how to compile these totals. No actions were taken. EPA recommends that further action should have been taken for this violation.

4. Rinker Materials
   LaPlatte, NE
   31-153-00047
   SM

An NDEQ inspection of August 28, 2001 found many violations, including failure to submit the 2001 air emissions inventory, failure to keep monthly and twelve consecutive month running totals, and failure to track or report HAP chemical inventory records. NDEQ issued an LOW. EPA would have pursued at least an administrative penalty action.

5. Concept Fiberglass
   Grand Island, NE
   31-079-00134
   Title V

An NDEQ inspection of May 24, 2000 cited a number of violations of construction permit conditions. An NOV was issued and cited these as high priority violations. The source returned to compliance with no penalty issued. An NDEQ inspection of April 1, 2001 found that a construction permit requirement for spay gun training and record keeping was not complied with. No action was taken. EPA would have pursued at least an administrative penalty action.

6. Deshler Municipal
Deshler, NE
31-169-00022
SM

NDEQ issued an LOW for failure to submit an annual certification. Because this source is a minor source, this action seems adequate.

7. Don Henry Power Plant
Hastings, NE
31-001-00061
Title V

NDEQ issued an NOV for failure to submit a 2000 annual compliance certification. EPA finds this appropriate for the first time violation. A letter dated August 28, 2001 , however, acknowledges receipt of the annual certification.

8. Darling International
Wahoo, NE
31-155-00039
SM

NDEQ issued an NOV on September 20, 200l for operating without a valid operating permit and failure to submit a timely and complete renewal application. This facility submitted some information additional on September 24, 2001. NOVs was issued on August 15, 2001 and May 26, 2000 for failure to submit annual compliance certification. An administrative penalty action, at a minimum, would have been appropriate in this case.

9. Aero-Tech
Fremont, NE
31-053-00078
Title V

NDEQ issued an NOV on February 15, 2001, for failure to obtain a PSD permit. A construction permit application was submitted resolving this violation. No further action taken by NDEQ. Operating without a permit should have warranted further enforcement action.

10. Bunge Lauhoff Grain
Crete, NE
31-151-00002
Class II - Synthetic Minor

NDEQ's last inspection of this Title V facility was November 15, 2000. This facility was not listed as an inspection candidate in the Air Quality Compliance Monitoring and Inspection Plan for 2001-2003, even though this facility should be inspected every two years.

11. Tetra Micornutirents
Fairbury, NE
31-095-000015
Title V

NDEQ issued a LOW on June 20, 2001 for PSD violation found during an inspection. The inspection report was not in the file. The facility subsequently submitted a PSD application, with no further enforcement follow-up by NDEQ. Additional enforcement was warranted in this case.

12. Great Dane Trailer
Wayne, NE
31-179-00011
Title V

An NOV was issued on January 6, 2003 for failure to keep records NDEQ is seeking penalties because of repeat violations. The violation is has been elevated to HPV status.

13. Excell Corporation
Schuyler, NE
31-037-00018
SM

An NDEQ inspection of August 12, 1002 indicated that permit condition XIIIH(3) requiring quarterly reports was violated. No reports have been submitted since permit issuance. Verbal request was made to submit quarterly report.

15. Swift Beef Company
Grand Island, NE
31-079-00016
SM

An NDEQ inspection of August 12, 2002 indicates that a Class II operating permit requirement to submit quarterly reports was not being complied with. No further action was taken.
NDEQ issued an LOW on November 30, 2001 for failure to submit a permit application renewal six months prior to expiration. The source submitted application on December 26, 2001. NDEQ returned the source to compliance with no further action.

Recommendations for Improvement

The following recommendations are made by EPA

1 Provide clear, detailed applicable requirements in inspection reports. The NDEQ inspection reports lack specific listings for applicable requirements. In reviewing the reports, it was unclear what the facility was subject to. Use of "Title 129" does not give enough detail.

2. Issue more formal enforcement actions, including penalty actions. In most cases reviewed a LOW was issued.

3. Clearly state to a facility that until the permit is modified, they must operate under their existing permit. Construction permit requirements cannot always be enforced because permit modifications are not completed. Until the permit is modified, the existing permit conditions are enforceable. Coordinate with the Permit Section to ensure that modifications are completed in a timely manner.

4. Documentation needs to be in the file as to whether a test result was approved or reviewed.

5. EPA encourages feedback and coordination with legal Services Division on case update and developments.

6. Insure penalties are consistently calculated per the Clean Air Act Civil Penalty Policy.

7. Discontinue the use of variances by revising pertinent regulations. In the interim, EPA suggests that Nebraska not issue any variances which allow sources to violate PSD, 112(g) or any other federal standard.

Appendix 1

Program Review Criteria

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY

Compliance & Enforcement Program

1. Main Office* oversight of field office activity

° How does the Main Office coordinate with the field offices concerning scheduling inspections, reviewing inspection reports, and violations discovered? Each field office is provided with a list of inspections to be conducted. Todd Ellis reviews most of the inspection reports completed by the field offices. The FO staff are responsible for preparing LOWs & NOVs signed by Todd Ellis or Shelley Kaderly. There is open communication between Todd and the FO Supervisor.

2. Main Office oversight of local agencies

° How does the Main Office coordinate/oversee the compliance and enforcement activities of the local agencies? We conduct biannual audits. The local agencies copy NDEQ on enforcement actions. They also participate on bi-monthly conference calls with EPA.

3. Main Office coordination; between enforcement group and permit group to coordinate with each other so that violations discovered by either group are communicated to each other? The permit & compliance staff are in close proximity to one another. The compliance staff are involved in the permit review process. The compliance staff are invited to permit section meetings. The supervisors talk frequently. Permitting staff have been directed to notify the Compliance Section when potential violations are discovered in the permitting process.

° What are the procedures for ensuring that the field offices are kept current on sources' permitting requirements? They receive copies of newly issued permits.

- How are permit violations which are a result of a pending permit modifications handled in compliance determinations if they have not been incorporated into the permit? They are violations. Case by case decisions on enforcement.

4. Coordination with legal staff

- How does the Main Office and field offices coordinate with agency attorneys and the State Attorney General's office? Coordination occurs between Todd and Legal Division. Interaction with the AG is funneled through Legal and usually only occurs when we are close to closing a settlement case.

5. Coordination with sources

- How does the agency communicate with sources concerning results of inspections? Violations discovered? They receive copies of inspection reports. Violations may be noted verbally on site. LOWs & NOVs are sent with the reports.

6. Agency coordination with EPA

- How does the agency coordinate with EPA when violations are identified? EPA is copied on significant LOWs and NOVs. Coordination also occurs on bimonthly calls.

- How are High Priority Violators selected and how is this information coordinated with EPA? We use EPAs HPV policy. See answer above.

7. Performing/reviewing state inspections

- How does the agency select inspection candidates and how is this selection coordinated with EPA? Major sources are on a once every 2 year basis. Minor sources (all) are on a once every 5 year basis. EPA receives the list.

8. Enforcement responses

- What are the procedures for responding to violations discovered during state inspections, self-reported violations, and failed stack tests? See answers to 5 and 6.

9. Response to citizen complaints

- How do the Main Office and field offices respond to citizen complaints? Contact either by phone or on-site must occur within 5 days of receipt of the complaint.

10. Data entry/tracking systems

° How does the agency track inspections completed, resolution of violations identified, stack test scheduling and completion, complaints, and receipt of self-reporting reports? Inspectors are responsible for items requiring follow up. We use the IIS for tracking. Brad Pracheil keeps track of stack testing notifications. Legal is responsible for self-reported audits.

11. Training/Regulatory Changes

° How does the Main Office train new inspectors? New enforcement personnel? All staff (permitting, compliance, planning) have CARB, APTI, and on-site shadowing opportunities available to them. We utilize training through CenSARA and other consortiums whenever possible.

° How does the Main Office and field offices keep current on regulatory changes? CFRs are made available. Bev and Melissa check the Federal Register regularly and post pertinent information on the Air Chalk Board. We are on a list serve. Is this the Region 7 list serve? We might say which list serve we are on. We receive information through STAPPA & ALAPCO as well as CenSARA.

° How does the Main Office communicate regulatory changes to the regulated community? Through our outreach opportunities, such as presentations to NICE, Safety Council, Industrial Associations, Air Update Workshops, and AWMA. We also post information on our website, do direct mailings, and write articles for the Environmental Update.

12. Variances

° Describe the NDEQ process used to approve or deny a request for a variance. Variances usually only come through the permitting program. A facility may request one and make a demonstration based upon the statutory requirements. Variances from PSD or NSPS/NESHAP requirements are not considered for approval. The permit writer reviews and summarizes the facts. The supervisor makes a recommendation to the Air Quality Division Administrator, who then makes a recommendation to the Legal Division. The Legal Division reviews and makes a recommendation to the Director. The Director will only consider a variance if we are sure we will issue a permit and we are ready to public notice.

° Provide a list of facilities for which variances were denied. Provide rationale for the determination. Only one variance in recent memory has been denied, KAAPA Ethanol in Kearney. It was denied because we knew there were concerned citizens in the area that wanted to express their concerns prior

to construction of the facility. Usually variances are not denied, but instead, they will not be issued.

In addition to the above enforcement program questions, the audit will include a file review by an EPA audit team of 50-75 stationary sources covering the two-year preceding period. The sources selected by the EPA will represent a geographical cross section of the stated/local area, and include an approximately equal number of major, synthetic minor, and minor NSPS/NESHAP (including MACT) sources. The file reviews will evaluate the agency's identification of violations and timeliness and appropriateness of the enforcement response. A list of the selected sources will be submitted to NDEQ about two weeks prior to the review. *Note: The phrase "Main Office" refers to the office with overall responsibility for the compliance and enforcement program.*

Appendix 2
Nebraska File Review Checklist Questions
February, 2003

Reviewer:_____ Date:____/___/___
Facility file reviewed:

Name: _____

Address: _____

AIRS ID #: _____

Violation(s) Found: Yes _____ No _____

Inspection Reports

1. Are the applicable regulations listed in the inspection report (which includes any permit limitations)?

2. Did the report document any violations found during the inspection (eg. constructing without a permit, failure to meet permit conditions? If a violation was found, describe what action was taken and by whom it was taken*.

Self Reporting/Excess Emission Reports(EERs)

3. EERs - For the reporting period: Were the total duration of excess emissions greater than 5% of the total operating time or did the total CEM/COM excess emission exceed 5% of the downtime? Describe violation and enforcement response.

4. Did the file contain other self reporting submittals documenting exceedance for a restriction for which the submittal is required eg. MACT semi-annual reports? Describe violation and enforcement response*.

Performance Tests, Citizen Complaints, Others

5. Did the file contain a performance test documenting the sources failure to comply with a regulatory limitation? Describe and states followup*.

6. Did the file contain evidence of a violation as a result of responding to a citizen complaint? Describe and states followup*.

7. Was there any other evidence or documentation of a violation in the file? Describe and states followup*.

8. Any additional source comments...

*** Remember to make a copy of any Enforcement related documents (eg: Notice of Violation(NOV), Administrative Orders and Consent Agreements, etc)**

Appendix 3

List of files for the Nebraska Program Review 2/13/03

Title V Sources

Source Name	City	AFS ID #	MACT	
Armstrong Cabinets	Auburn	31-131-00002	JJ	
Behlen Mfg. - SM	Columbus	31-141-00004		
Bung Lauhoff Grain -SM	Crete	31-151-00002		
Aero-Tech. Inc.	Fremont	31-053-00078		
Camaco Columbus Mfg.	Columbus	31-141-00002		
Clean Harbors	Kimball	31-105-00009	EEE	
Columbus Terminal	Columbus	31-037-00030	R	
Concept Fiberglass	Grand Island	31-079-00134		
C.W. Burdick Generating Station	Grand Island	31-079-00001		
David City Municipal Power Plant	David City	31-023-00019		
Don Henry Power Plant	Hastings	31-001-00061		
Endicott Clay Products	Endicott	31-095-00001		
Great Dane Trailers-SM	Wayne	31-179-00011		
HVAC, Inc.-Natual minor	Hastings	31-001-00012		
Homestead Nitrogen	Beatrice	31-067-00002		
Kerford Limestone-SM	Weeping Water	31-025-00006		
KMIGT Holdrege Compressor	Holdredge	31-137-00017		
Lon D. Wright Power Plant	Fremont	31-053-00001		
Magnolia Metal Corp	Auburn	31-127-00003		
New Holland North American	Grand Island	31-079-00010		
Norfolk Terminal	Norfolk	31-119-00002		
NPPD Gerald Gentleman Station	Sutherland	31-111-00019		
Omaha Papillion Creek WWTP	Bellevue	31-153-01002		
OPPD Sarpy County	Bellevue	31-153-00005		
Orthman Manufacturing	Lexington	31-047-00075		
Overhead Door -No permit required	Grand Island	31-074-00090		
Progress Rail Service	Sidney	31-033-00039		
Proliant Inc.- no permit required	Fremont	31-053-00063		
Rail Environmental Service	North Platte	31-111-00036		
Reinke Manufacturing	Deshler	31-164-00021		
Sara Lee Bakery	Hastings,	31-001-00072		
Stuart Municipal Power Plant-SM	Stuart	31-089-00023		
Tenneco Automotive	Cozad	31-047-00031		N
Tetra Micronutrients	Fairbury	31-095-00015		
Timpte Inc.	David City	31-023-00025		
Union Pacific RR	North Platte	31-111-00081		
Wayne Municipal Power Plant	Wayne	31-179-00001		
Western Sugar	Baynard	31-123-00001		
Whelan Energy Center	Hastings,	31-001-00042		
Williams Pipeline-SM	Doniphan	31-079-00030		

SM Sources

Source Name	City	AFS ID #	MACT
AG partners Cooperative	Rulo	31-147-00011	
AGP Corn Processing Inc.	Hastings	31-001-00064	
Agrex Inc.	Norfolk	31-119-00054	
Alliance Municipal Power Plant	Alliance	31-013-00022	
American Shizuki Co	Ogallala	31-101-00006	T
Ampel	Weeping Water	31-025-00032	
Barker Cleaners, 1145 Jackson St. Sidney			M
Becton Dickinson & Co.	Columbus	31-141-00095	T
Beef Products Inc.	South Sioux City	31-043-00072	
Burwell Light Plant	Burwell	31-071-00003	
Cargill Dow LLC	Blair	31-177-00052	
Centennial Pork	McCook	31-145-00010	
Columbus Metal Industries	Columbus	31-141-01019	
Conagra Oat Processing	South Sioux City	31-043-00020	
Corby Kennedy Aluminum Smelter	Hastings	31-001-00093	
Darling International	Wahoo	31-155-00039	
Deshler Municipal Utilities	Deshler	31-169-00022	
Dudden Redi-Mix Sand & Gravel	Bridgeport	31-123-00014	
Eaton Corporation	Kearney	31-019-00017	N
Excel Corporation	Schuyler	31-037-00018	
Fiberglass Products, Inc	Aurora	31-081-00015	
Frito-Lay Inc	Gothenburg	31-047-00076	
Golden Spread Redi-Mix Inc.		31-777-00460	
H & M Equipment Co.	Alda	31-079-00117	
Highlander Center Drycleaners	McCook	31-145-00032	M
Hill Material Co.	Chadron	31-045-00012	
IBP Inc.	Lexington	31-047-00047	
Interstate Electric Motors	Omaha	31-053-00078	
Kendall Company	Norfolk	31-119-00011	
Liberty Cleaners & Launderers	Grand Island	31-079-00132	M
Martin Marietta Materials Inc.	Weeping Water	31-025-00029	
Nebraska Energy LLC	Aurora	31-081-00017	
Nestle Purina Pet Care Co.	Crete	31-151-00005	
N. R. Hamm Quarry	Pawnee City	31-133-00001	
Plains Produce	Minden	31-099-00022	
Plaza Laundry & Dry Cleaning	Fremont	31-053-00072	M
Pony Express Greenhouse	Gothenburg	31-047-00048	
Rinker Materials	LaPlatte	31-153-00047	
Siouxland Concrete Co.	South Sioux City	31-043-00019	
Swift Beef Company	Grand Island	31-079-00016	
Thermo King	Hastings	31-001-00048	T
Triangle Metals Corp	Kearney	31-019-00080	RRR
Valmont Industries	McCook	31-145-00035	

Appendix 4

Nebraska Department of Environmental Quality
Program Review
Compliance/Enforcement Programs
February 24-25, 2003
Preliminary Findings

Summary of Preliminary Findings

EPA Air Program and Compliance staff reviewed 60 files. Of these 60 files, 14 cited a violation. The files included general, record files, confidential files, permit files and legal files. These are the findings from the file review and responses to program review criteria questions

Positives

* Issuance of LOW for failure to submit compliance certification reports on synthetic minor (SM) sources.

* Failure to submit Title V certifications are being monitored.

* Creation of district field offices has enhanced field presence.

* New staff are being training appropriately to carry out inspection responsibilities.

* Inspection reports are greatly improved over previous review in 1997.

* Limited inspection staff, but maintaining CMS schedule.

* Annual audits of local agencies.

Areas of Improvement

* Coordination between Permit and Compliance staffs.

* Review of all inspection reports for consistency by compliance supervisor.

* 14 violations found during file review:

Not enough detail on applicable requirements in inspection reports e.g. checklist,
More NOVs could have been issued where they weren't,
A few cases identified where enforcement should have gone beyond NOV
Construction permit requirements cannot always be enforced because permit modification not completed.
Test results not always approved or reviewed.

* Coordination with Legal. Encourage case updates.

* Insure penalties are consistently calculated per the Clean Air Act.

* Ensure that all NOVs and LOWs for major, SM, NSPS and MACT are forwarded to EPA.

* Variance.

Items needed:

Enforcement Manual, including penalty policy

APPENDIX 5 - ORGANIZATIONAL CHART FOR NDEQ

SECTION III - PERMIT PROGRAM REVIEW

Findings and Conclusions
General

NDEQ files were well ordered. Their files are divided into Permitting, General, and Records. Each document in the file had a bar code for tracking. NDEQ staff is able to use their computer system to see an index of the documents in the file and which of the files the documents are in. NDEQ plans to make all documents in files available electronically in the future.

NDEQ does very few NSPS/NESHAP applicability/non-applicability determinations outside their normal permitting procedures. Only five requests for determinations could be remembered. These five requests were for MACT determinations as a result of the 112(j) requirements. Although there are very few requests outside of permits, most permits issued make NSPS/NESHAP determinations.

NDEQ is using Excel spreadsheets to track permits. These spreadsheets include facility name, application date, who the application was assigned to, important dates, and status. The IIS system is also used to track permitting information. NDEQ is developing a new IIS permitting module for tracking permitting information and it will send information to EPA's Air Facility System (AFS).

Discovery System

Agencies should have methods for informing sources of the possible need for permits. NDEQ's Air Division has a formal outreach plan. NDEQ's air program has two outreach meetings each year covering air and Resource Conservation and Recovery Act (RCRA) issues. The meetings are open to industries and consultants. They also meet with economic development groups such as the corn-ethanol board and other association meetings. Also, NDEQ sends the Air Quality Compliance Calendar to all of their approximate 800 permitted sources. NDEQ has a web site at http://www.deq.state.ne.us/ that is used for outreach. In addition to the air program's outreach, the Small Business Assistance Program also does outreach including having a "Consultants Day" each year.

NDEQ discovers non-permitted "as built" sources that should have received construction permits in a number of ways including:

1. operating permit applications;
2. newspaper articles;
3. source inspections;
4. complaints; and
5. the Small Buisness Assistance Program.

They estimate that "as-built" source comprise from 5 percent to 10 percent of their total construction permits. We found seven "as-built" permits during our file review.

Applicability/Non-Applicability Determinations

NDEQ does not have a formal system for classifying construction permit applications for determinating the intensity and nature of the review. Clark Smith screens the applications. PSD and PSD avoidance permits are assigned to one of NDEQ's two senior engineers for review. Also, 25 to 30 percent of the applications are reviewed by consultants hired by NDEQ.

Fugitive emissions are considered in the applicability of construction permits and modeling. Haul road emissions have been a big issue in Nebraska. The Nebraska Industry Council on Environment (NICE) has been questioning the need for the assumptions used for modeling to be made enforceable in the construction permit. We believe that NDEQ's practice of putting modeling assumptions in constructions permits is correct.

Agencies should have mechanisms for detecting companies that submit two or more permit applications for one project to avoid PSD. NDEQ assigns all the permit applications from the same company to the same staff person for review. This helps NDEQ detect companies trying to split projects. It also helps the staff become familiar with specific industrial processes. NDEQ also writes detailed fact sheets for all their permits. These fact sheets allow staff working on an application to know what has happened at the source in the past, which helps staff detect projects being split.

When making applicability/non-applicability determinations, EPA issued policy and guidance documents are used. Each staff member has access to the NSR/PSD Policy and Guidance Database, Title V Policy and Guidance Database, and the Applicability Determination Index (ADI). Where NDEQ does not agree with the guidance they work with EPA to try to resolve any difficulties. NDEQ also has internal guidance. They have guidance notebooks, which contain guidance on permit issuance process and procedures. They also have developed a Lotus Notes database they call the "Air Chalk Board." The Air Chalk Board is a searchable database with NDEQ's policy decisions. Their staff also uses the "Rule Tools" CD made by EPA Region 7 and they would like to see it updated.

NDEQ uses the ADI when making NSPS or NESHAP applicability determinations. They also consult with EPA if they have any questions regarding NSPS or NESHAP standards. Also, determinations are checked during the permit's peer review process. This peer review process includes both a technical and a compliance review. Every determination is also reviewed by Clark Smith and Shelley Kaderly. Also, sometimes NDEQ's legal staff is requested to review determinations. The staff has been told that they cannot deviate from NSPS and NESHAP requirements but what authorities have been delegated is not always clear.

On a case-by-case basis, NDEQ will pursue documentation to support statements made by sources that the Department relied on in making applicability determinations. Inspectors are often used to verify the actual size or capacity of equipment installed.

Formal determinations are made in writing and filed in the sources file. They are most often in permits and the fact sheet for the permit explains the rational for the determination. Shelley Kaderly signs all formal determinations. When an answer or opinion is given over the phone or at a meeting the conversation is documented if the question deals with a permit or specific source. E-mails regarding any specific source are printed out and put in the source's file. EPA is notified of determinations if they are non-routine or precedent setting.

Technical Resources

NDEQ maintains a resource library with air regulations, a personal computer workstation, and a technical library. The library contains some of the older EPA-issued Background Information Documents (BIDs), inspection manuals, enabling documents, and other similar materials. The Internet is used to obtain new BIDs. NDEQ seldom gets materials through EPA libraries. The staff has access to historic *Federal Register* notices from the Library Commission, which is located on the first floor of the same building NDEQ is in. A staff person tracks new *Federal Register* notices and informs others on the staff via e-mail of notes that pertain to the air program. Each staff member has current copies of the Code of Federal Regulations (CFR) .

A member of the staff has prepared notebooks on each MACT standard. The notebook contains the proposed and final *Federal Register* notices, BIDs and other EPA documents.

Each staff member now has access to the Internet from their computer. This allows the staff to access EPA's web pages and databases such as the ADI, the Technology Transfer Network (TTN), and the PSD/NSR and Title V Policy and Guidance Databases. This is an improvement over the situation in 1998 when staff had to use computers in the Library Commission offices to access the Internet.

NDEQ has access through the Internet to the RACT/BACT/LAER Clearinghouse (RBLC), which they and other agencies issuing permits can use as a resource. The RBLC depends on agencies to input data from their permit decisions. NDEQ has not entered information on BACT determinations for the following recent permits:

1. Lincoln Electric System Salt Valley Generating Station
2. City of Grand Island C. W. Burdick Generating Station
3. Nucor Steel
4. Cargill
5. Omaha Public Power District

Other sources of information NDEQ uses include:

1. monthly call with Central States Air Resource Agencies (CENSARA);
2. calls with Bill Peterson of EPA on ethanol facilities;
3. e-mails to other state agencies;
4. monthly State and Territorial Air Pollution Program Administrators (STAPPA) calls; and
5. weekly STAPPA calls on NSR reform.

Permit Issuance

Flow Charts of NDEQ's air permit issuance process are in Appendix C. While preparing the draft permit the permit writer also prepares a detailed fact sheet. The fact sheet documents the history of the source, emission calculations, and applicability determinations. We think these fact sheets will be of great benefit for future permitting actions at the source. Every permit goes through a formal peer review process. The peer review process consists of a technical review, a review by compliance, and an Expert Review Team (ERT) review.

Public notice is provided for all construction and operating permits. Notices are published in the *Omaha World-Herald* for general operating permits and permits for portable sources. Other notices are published in a newspaper with circulation in the area the source is located in. NDEQ created a news release in both English and Spanish for a proposed Ethanol Plant, Platte Valley Ethanol, in Gering. The news release was posted in public locations and is included in Appendix D of this report. NDEQ has identified the counties with significant concentrations of Hispanic or Latino populations and plans to do public notices in both Spanish and English for all future permitting actions in these counties.

Permits used to be delayed because of lack of staff but now most delays are for getting information from applicants. This is especially true for ambient air quality modeling. EPA has not caused delays and determining Best Available Control Technology (BACT) standards have not caused projects to be off schedule. Title V permit issuance has been delayed by past problems at sources.

NDEQ allows sources to do dirt work before the permit is issued. The work allowed includes removing and stockpiling topsoil or compacting soils. NDEQ's policy does not allow construction activities on emissions units which are of a permanent nature such as the installation of building supports and foundations, laying of underground pipe work, or the construction of permanent storage structures. However, NDEQ allowed the construction of an administrative building foundation at Husker Ag Processing LLC before the construction permit was issued. Husker also asked for permission to build a concrete pad for the fermenter and beer well but NDEQ did not allow them to construct the pad. NDEQ allowed the City of Grand Island to install 1,600 feet of chain link fence, to install a new gate in the existing fence, and to densify the soil in the area planned for the new turbines. EPA interprets the preconstruction permit requirements to prohibit any construction that is costly, significantly alters the site, and/or is permanent in nature. This would include, but is not limited to: (1) excavating, blasting,

removing rock and soil, and backfilling, and (2) installing footings, foundations, permanent storage structures, pipe, and retaining walls. The concern is that if sources make costly or permanent investments before a permit is issued, it could make enforcement difficult with the source arguing that denial of the permit would unreasonably interfere with their investment.

NDEQ issues variances to allow sources to construct and in some cases operate before the construction permit is issued. Their policy is to only issue variances for true minor sources. The most common type of sources receiving variances are asphalt plants. NDEQ stated that an asphalt plant permit by rule would help to avoid as many variances for asphalt plants. EPA does not recognize these variances until we approve the variance into the State Implementation Plan (SIP) as a site-specific SIP revision. We found variances for the following facilities:

Facility Name	**Date Variance issued**	*	**Date Permit was issued**
Excel Corp.	7/20/01	C	1/8/02
Waste Management of Nebraska/Douglas County RDF	8/10/01	C	1/8/02
Columbus Hydraulics Co.	11/13/01	B	12/13/01
Plains Produce LLC	10/24/01 12/4/01	C O	8/30/02
Hastings HVAC	3/20/02 6/17/02	C O	7/23/02
Golden Spread Redi-Mix	6/14/02	B	11/12/02
New Holland	4/19/02	C	9/02
Cargill Dow LLC	1/12/01 10/26/01	C	5/8/01
Cargill Inc.	12/16/99	C	5/1/00

* Construction/Operation/Both

Requests for variances from Alliance Municipal Power Plant, and Kaapa Ethanol were denied. The variance for New Holland allowed the construction of parts of a 112(g) process or production unit before the 112(g) approval was issued.

Coordination

Nebraska has two local agencies that issue construction permits and operating permits. The local agencies have their own Tile V approval and NDEQ has delegated PSD to these agencies. The local agencies work autonomously from NDEQ but they agencies coordinate with each other. The local agencies have their own permit issuance procedures. NDEQ performed an audit of the local agencies last year and did not find any problems. NDEQ gets notified as an affected state for Title V (Class I) permits by the local agencies. The local agencies also send NDEQ all PSD permits for review.

NDEQ's air program also coordinates with other media's programs. For example, the water program has been invited for pre-application meetings with ethanol plants. They have also worked with RCRA in outreach activities and in issuing permits to hazardous waste combustors.

Emission Limits and Permit Conditions

NDEQ has a template of general permit conditions that go in every permit. Near the top of each construction permit there is a brief description of the equipment being approved for installation or modification. The fact sheets often have a more detailed description of the equipment and were more likely to specify the manufacture and model of the equipment being installed. We recommend that the permit contain this same level of detail to assure that the equipment reviewed is what is actually installed. Construction permits contain all the requirements that the equipment being installed is subject to including SIP, NSPS, and NESHAP. Construction permits will sometimes omit SIP requirements where NSPS, that the source is subject to, are more stringent and will assure compliance with the omitted SIP requirements. Class II permits include all requirements applicable to the source just like Class I permits. Checklist are used during the reviews of the permit to assure that the permit address all applicable requirements. These checklist are included in Appendix E.

Permits contain special conditions for each source. Many permits have conditions to limit the sources potential to emit (PTE). NDEQ uses 12-month totals or averages by default when limiting the PTE of sources. No special provisions are included for 12-month limits to assure compliance during the first 11-months. Each emission limit specifies an averaging period. The National Ambient Air Quality Standard (NAAQS) averaging times are used for limits created in order to protect the NAAQS. Permits do not always specify both a variable emission limit and an emission limit cap. The variable emission limit can vary either with load or production. No special conditions are included in construction permits for malfunctions other than what is in their SIP. Permits for portable sources require that the source notify NDEQ prior to re-locating the source. NDEQ is sometimes requiring dispersion modeling as part of this notification.

Construction permits require an initial verification of compliance with emission limits on a case-by-case basis via a performance test. When performance testing is required, the permit includes a deadline for the testing to be completed. In most cases the permit does not specify the

test procedures and methods. Instead, the permit requires the source to submit a testing protocol for approval. The protocol is reviewed by compliance staff with expertise in stack testing. Permits include requirements for demonstrating continuing compliance with Continuous Emission Monitoring Systems (CEMS) or parameter monitors on a case-by-case basis. Predictive Emissions Monitoring Systems (PEMS) have been allowed in some cases. NDEQ normally specifies some type of monitoring, reporting, or recordkeeping requirements for each permit restriction. In cases where the source is physically unable to violate the limit, monitoring would not be required and it would be explained in the fact sheet. "Excess emissions" are not defined in construction permits but are defined in operating permits.

Permits are written to be a stand-alone document. Each term specifies the legal authority for the term and the permit specifies the regulations it is being issued pursuant to. The fact sheet for the permit goes into more detail for each permit condition. Except for General Class II permits, the permit application is not considered part of the permit and is not considered enforceable. NDEQ includes in permits items from applications that were relied on in issuing the permit such as stack heights.

Air Quality Impacts

NDEQ has a detailed modeling guidance document titled "Atmospheric Dispersion Modeling Guidance for Permits." It is available on NDEQ's web site and explains when modeling has to be performed and how the modeling is to be done.

An ambient air impact assessment is generally required for all construction permits. Major sources are required to do the modeling and synthetic minor sources normally do the required modeling. NDEQ helps minor sources with modeling. As discussed above, modeling is one of the most common causes for delays in issuing construction permits.

A review of their modeling procedures and practices was beyond the scope of this permitting review. Instead, modeling is reviewed in detail in the Planning section of the report.

Permitting Staff and Duties

The Permitting Section consists of a supervisor, one modeler, one administrative support position, and ten positions for permit writers. Currently, one position is vacant and NDEQ is

working on filling it. Furthermore, they are considering adding another position. The staff's experience is summarized in the following table.

Years of Experience	Number of Staff
<1	0
1-2	3
2-5	4
5-10	2
>10	2

Staff turnover has not been an issue lately and the staffing situation has improved considerably since 1998. In 1998, there were six vacant positions including the unit supervisor and the average experience of the staff was just over two years.

Currently, four of the staff is used to issue construction permits. NDEQ plans to move some of the staff from issuing operating permits to construction permits after all the initial operating permits are issued. Private sector consultants are also hired by the department to assist in issuing permits. NDEQ gives them the most difficult Class I and synthetic minor permits. The consultants also do the initial technical review for permits drafted by NDEQ. Permits drafted by consultants are peer reviewed by NDEQ just like permits NDEQ issues.

Training

NDEQ's permit program does not have a formal training plan for new staff on air pollution or permitting subjects. They do have a training check list for new employees on general office procedures. NDEQ does take advantage of EPA's Air Pollution Training Institute training course and they have a satellite downlink site. NDEQ has also been putting on in-house training on various MACT standards and have been inviting the local agencies to attend these trainings. Permit staff try to visit 50 percent of the sources they permit. These are tours that are conducted jointly with the compliance staff so the permit writers learn about the processes they are permitting. NDEQ's permit review procedures allow new permit writers to learn from more experienced staff as their permits are reviewed.

NDEQ would like to see the following training in the near future:

6. NSR Reform for some NDEQ personnel that will be involved in deciding on the best option to update their rules;
7. training on MACT standards; and
8. how to determine BACT.

They see a long term need for NSR reform training in the future.

Anticipated Changes to the Permitting Program

NDEQ anticipates the following changes:

9. NDEQ plans to fill one vacant permit writer position and hopes to add a new position for a permit writer;
10. there is also a bill in their Legislature that would have NDEQ charge fees for construction permits;
11. the need to implement the NSR Reform changes will cause changes; and
12. they hope to create construction permit-by-rules to remove some of the workload from the permit writer staff and reduce the number of variances they issue.

File Review - General Findings

We reviewed 36 source files, looking at recent permits and supporting information. The files were well organized.

The files contained very detailed fact sheets which explained the basis for each permit. These fact sheets were helpful and contained a good record of the sources history, PTE changes and emission changes. They documented the emission factors for the emission calculations. Also, they explained applicability decisions.

It was clear from the files that permit issuance at NDEQ is a team effort. Every permit had evidence of a technical and compliance review. The comments the permit writer received were constructive and improved the permits and their consistency. The staff seemed to have open and honest communication with each other on permitting issues.

We discovered seven occurrences where the source constructed without applying for permits. These as-built permits were issued to the following sources:

13. Columbus Hydraulics
14. Fremont Area Medical Center
15. Nebraska City Utilities
16. Even-Temp, Inc.
17. Webco Printing
18. Grand Island Accessories
19. Cargill Inc.

As discussed above, public notice is provided for all construction and operating permits. The files contained copies of the notices and proof that the notices were published. The notices also announced that documents related to the permit were available at a library near the proposed sources location. The files also contained response to comment documents when public

comment was received. The standard format that was used for response to comment documents was good and easy to follow.

In general the permits were well written and clear. Conditions that do not apply to the source are not included in the permit. Emission limits specified averaging times. Construction permits cite the legal authority for each condition and they cite which NDEQ regulations they are being issued pursuant to. Some permits, such as the permit for Fiberglass Products, specified exactly how volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions were to be calculated and where and how to obtain the data needed to do the calculations. Construction permits could be more specific on what they were approving to be built. The fact sheets often had better descriptions including manufacturer and model information.

In many permits the PTE limits were established right at the major source or significant threshold levels. Many of these limits were set using AP-42 emission factors. Furthermore, many of these AP-42 factors have low accuracy ratings. For example, Offutt Air Force Base's generators were limited based on 39.9 tons a year of nitrogen oxides (NO_x) using a D rated AP-42 factor. Alliance Municipal Power Plant limit was set to 248 tons per year of NO_x. Other examples include the permits for Great Dane Trailers, New Holland, Husker Ag Processing LLC, and Kaapa Ethanol. We noticed that NDEQ occasionally requires sources to test to verify emission factors such as at Trenton Agri-Products and Lon D. Wright Power Plant. Also, we did not see any consideration given to emissions during startups or shutdowns. Many of the limits were twelve-month rolling limits. There was no justification provided in the files for not using shorter time periods for the limits. None of the twelve-month limits reviewed had special provisions for the first eleven months except for the Alliance Municipal Power Plant's permit. No calendar year limits were discovered except for a June 6, 1998 construction permit issued to Valmont Irrigation in McCook. Lastly, it would be helpful to see a condition in PSD avoidance permits, or in the statement of basis, that explains the consequences of not meeting the limits. For example, pursuant to 40 CFR §52.21(r)(4), the permit could explain that if a limit is not met or later relaxed, it will be deemed to trigger PSD review as thought the project were never built. This would make clear that the limits are meant to be complied with.

No mistakes on NSPS or NESHAP applicability were discovered. The fact sheets documented why the applicability decision was made the way it was but sometimes it was hard to tell from the files if the determination was correct. For example, it was determined that NSPS Subpart Kb applied to a storage tank at Fremont Area Medical Center but the date the tank was built could not be found in the file. At Swift in Grand Island two boilers were installed which NDEQ said were subject to NSPS Subpart Dc but we could find no information in the file to verify the date these units were built, so it was not clear if these were new or used boilers. Also, the Fact Sheet said an existing boiler was not subject to NSPS Subpart Dc but there was no evidence in the file that NDEQ looked to see if the boiler had been modified or reconstructed since installation. The permit for N. R. Hamm Quarry, Inc. is another example. The permit contained NSPS Subpart OOO requirements and the fact sheet said that OOO applies, but we could not find documentation in the file showing the date the equipment was constructed. We noticed that construction permits were being written so if EPA approved alternative monitoring,

the permit would not need to be revised. However, we also noticed that NDEQ waived 40 CFR Subpart GG's requirement for daily assessments of the nitrogen content in the fuels at the Lon D. Wright Power Plant, although Nebraska has not been delegated the authority to approve alternative monitoring scenarios. Further, the basis for the waiver was not quite correct. Many recent determinations allow outright waiver of nitrogen sampling on the basis that the owner or operator chooses not to apply the fuel-bound nitrogen adjustment to the emission limitation. With the newer turbine technologies, it is much easier for an operator to meet the limits so no further adjustment is necessary. While natural gas firing is a key component to meeting these lower emissions, the basis for the nitrogen sampling waiver is not that the fuel contains little or no nitrogen but that the operator doesn't need the adjustment. We would be willing to work with NDEQ to set up procedures to approve alternative NSPS Subpart GG daily fuel sampling for sources burning pipeline quality natural gas.

Modeling was considered in the issuance of many construction permits to assure the NAAQS were not violated. For example, Fremont Area Medical Center's file had modeling information on sulfur dioxide (SO_2), particulate matter, and nitrogen dioxide (NO_2). Excel Corp. was required to model for NO_2, SO_2, and particulate matter and haul road emissions were required to be considered in the modeling. Modeling was also required for Nebraska City Utilities, Alliance Municipal Power Plant, and many other sources. In some cases, such as Fremont Medical Center, Spalding Light and Power, and Plains Produce LLC, changes to the design of the project were made because of modeling. No modeling was required for projects at N. R. Hamm Quarry, Inc., Siouxland Concrete Company, or Valmont Industries.

File Review - Specific Findings

While reviewing the files we found several source specific issues, which are described below:

Nebraska City Utilities

A non-PSD construction permit was issued on 10/04/02 for an electric generating unit, Unit 10, initially installed at the site in 1979. An internal memo dated 9/30/99 provides the following information:

> The department sent a letter, dated 10/26/77, to the city stating that a construction permit would not be needed for the unit. At that point in time as now, the department's rules did not impose a permitting requirement when a unit's emissions would be less than applicable amounts set forth in Rule 3 (4)(a)(iii). For NO_X, the emission rate which triggered the need for a construction permit was 50 lbs or more during any 24-hour period.
>
> The 9/30/99 memo sets forth a recalculated NO_X emission rate for the unit of 4684 lbs NO_X per 24-hour period. The memo states "... a construction permit was required for the installation of Unit #10, contrary to what was indicated in the October 26, 1977, Department letter to the source".

> In addressing the PSD regulation, the memo concludes that since the city commenced actual construction on the unit prior to 8/07/77 that the 6/19/74 version of the regulation is the version of the regulation which should be used to address PSD applicability. The memo then concludes that the installation would have been exempt from the 6/19/74 version of the regulation. The basis for that opinion is not given; however, it appears the opinion was based on that version's applicability to only PM and SO2 emissions.

The department apparently concluded that the 10/26/77 determination was in error and needed to be corrected. As noted above, the unit was issued a construction permit on 10/04/02, approximately 25 years after the unit was installed.

In looking back to determine which version of the PSD regulation should be used to address PSD applicability/non-applicability, the department erred in not considering all criteria which must be addressed in determining if a source has commenced construction on a unit. The regulation specifies that "commence" means that the owner/operator has obtained all needed construction approvals/permits **and** has begun actual construction. The department's 9/30/99 memo ignored the fact that, at the time of the memo, the city had not obtained all needed construction approvals/permits -- specifically the permit required by Rule 4 (2)(a).

At the time of the memo, the 1999 version of the PSD regulation should have been cited as the applicable version. That version of the regulation differs considerably from the 1974 version; e.g, it addresses many more pollutants including NO_X.

Therefore, the correcting action taken by the department in 2002 regarding the unit should have been the issuance of a PSD permit rather than a non-PSD construction permit.

Alliance Municipal Power Plant

The department issued a construction permit on 7/23/01, which restricted NO_X emissions to 248 tons per 12-month period for the installation of three units. This limit was used to keep the new units out of PSD. The limit was a "blanket" restriction, which may not be used to restrict PTE. PTE may be restricted only by the types of restrictions listed in the definition of PTE in the PSD regulation such as operating hours or the amount of material processed.

Armstrong Cabinets

The Title V permit had well written permit shield.

Spalding Light and Power

The permit project involved the "after the fact" approval of two new diesel-fired IC engines at the Spalding Light and Power facility. One engine was originally constructed in the 1950's and the other in 1985. Both were relocated to the Spalding facility in

January through September of 2001. The existing facility has three IC engines built between 1942 and 1975.

In March 2002, NDEQ issued a Notice of Violation for the failure to obtain a pre-construction permit. By that time, both engines were in place and operating. Later that month, Spalding submitted a construction permit application and applied for low-emitter registration. The final permit was issued in October, 2002.

During the permit review, NDEQ modeled the impacts from all engines at the plant. Modeling predicted adverse impacts on NOx and CO, so the state imposed hours-of-operation, fuel, and stack height restrictions on each engine; both new and old. Three rounds of modeling were documented to help provide the source the amount of operational flexibility they desired.

The permit record was very well documented and contained a detailed fact sheet describing the permitting effort. The permit reviewer correctly concluded that the new IC engines were not subject to the PSD, NSPS, and 112(g) HAP review programs. The permit record also included an internal peer review of the draft permit by the compliance section, which made several good suggestions for improving the enforceability of the permit. The technical review checklist was also very comprehensive.

The permit record noted that the new IC engines would qualify for a "new unit exemption" under the Title IV acid rain program because of their size, age of installation, and fuel choice. It appears that the new units are likely fully exempt from the acid rain program because they were originally constructed prior to 1990. In any case, no "new unit exemption" application was found in the file.

Lon D. Wright Power Plant

In July 2002, the City of Fremont received a permit to construct one 40 MW natural gas and distillate-fired turbine at its Lon Wright Power Plant. The existing plant is a major stationary source. The permit file contained extensive emission estimates for the turbine, but all were based on vendor guarantee data with no documentation found in the file. The permit limited usage of natural gas and distillate fuel oil to assure that the potential turbine emissions remained below the PSD significance thresholds; with NOx being the critical pollutant. Lon D. Wright was also required to keep detailed fuel records, but no explicit mass balance methodology was specified to verify that NOx remained below the 39.5 ton-per-year cap. Even though the fuel records are likely adequate to show that limits on fuel usage are not exceeded, it would have been good to take the calculation a step further and have Fremont verify that NOx emissions remained below 39.5 tons-per-year. Since PM10 emissions were also close to the 15 ton-per-year significance threshold, the state required that Fremont demonstrate initial compliance with the PM10 limitation through testing.

Documentation in the file suggested that the 40 CFR Part 60 Subpart GG NOx limit for the turbine would be approximately 98 ppm while combusting natural gas and 91 ppm while combusting distillate; both corrected to 15% oxygen. Yet the vendor guarantee for natural gas firing (0.0551#/mmBtu) and for distillate firing (0.1629#/mmBtu) correlates to approximately 187 ppm and 526 ppm, respectively, corrected to 15% oxygen. Since the latter values were used to limit the unit out of PSD review and appear to be very conservative, the turbine will likely remain far below the PSD threshold. However, since the vendor guarantees are a factor of 1.9x and 5.8x the NSPS standards while burning natural gas and distillate, respectively, the compliance tests should be reviewed carefully. Periodic tests may also be prudent to assure that the limits are being met.

The permit record provided mixed signals on applicability of the acid rain program to the new turbine. In the draft peer review copy of the permit, there was language that indicated the turbine would be subject to the acid rain program and explained some of the Title IV obligations. Following peer review, the suggestion was to remove any mention of acid rain applicability. Further review of the file revealed that no Title IV acid rain application had been submitted, or if submitted was not in the file. The existing Title IV permit for the coal-fired boiler was found in the permit file, but had not been amended to include the new turbine. The department should ensure that the Title IV application has been submitted and that the Title IV permit will be amended as appropriate.

Grand Island Accessories

On April 29, 1998, a combination construction and operating permit was issued to this facility for a term of five years. It is not made clear in the permit that it is only the operating portion that expires at the end of the five-year term, and appears to suggest that the construction permit also will expire at that time. This permit will expire on April 29, 1988, five years after it's issuance, and when reissued it should not be issued as a combination construction and operating permit unless the expiration after five years is explicitly limited to the operating portion. In addition, the source did not submit their re-application within the required six month time frame prior to the expiration date of the permit and therefore, unless the permit is reissued by April 29, 2003, the source will be in violation of operating without a permit since it does not have an operating permit application shield.

New Holland

The New Holland facility was originally built in 1965. Over the last several years, it has been redesigning plant operations to shift from manufacture of hay equipment to combines. As part of plant retooling to allow for more efficient manufacturing, the facility switched from spray primer and enamel topcoat to e-dip primer and urethane topcoat, resulting in decreases of VOC and HAPs per unit of production.

In 1997 and 1998, average actual VOC emissions from the plant were approximately 288.4 tons per year. The potential increase in emissions from the new equipment, based on the application submitted in January 2002, was estimated at 232 tons per year. The

company estimated that replacement of the existing equipment with the new would result in a decrease of VOC of 2.2 tons per year.

In March 2002, the company petitioned NDEQ for a variance from the construction permitting program to commence construction on a new 20,400 square foot building and new surface coating equipment. NDEQ granted the variance, against EPA's recommendation, April 19, 2002, excluding authorization to construct or operate the topcoat spray booths, but authorizing construction of the building, primer coating equipment, and drying ovens.

The construction permit was ultimately issued in September, 2002, establishing both monthly and annual caps on the new equipment. The algorithm for calculating total VOC was comprehensive and even provided credit for shipment of off-site waste. The permit also included adequate recordkeeping to assure that the running VOC totals could be cross-checked for compliance against the monthly and annual limitations. As with other permits reviewed, the file contained a comprehensive permit review record including the public notice, draft construction permit, expert analysis, permit applications, and response to comments document. In addition, the file correctly noted that a new 12.5 mmBtu/hr boiler would be subject to NSPS Subpart Dc.

Based on EPA's review of the file, and in prior conversations with NDEQ, we continue to believe that the variance should not have been issued, whether the emissions equipment was excluded or not. Further, EPA continues to believe that the new equipment installed under the 2002 permit likely triggered PSD review. As described above, the company used a baseline year of 1997 and 1998 to calculate their existing actual emissions for the equipment to be retired. An analysis provided by the company contended that the number of production units in 1997 and 1998 were much more "representative" than the number of units built in 2000 and 2001; the two years prior to the permitting exercise. As a consequence, the emissions baseline used for the retired equipment was approximately 234 tons per year – corresponding to years four and five in the contemporaneous period – rather than the 163.8 tons per year achieved in the two years prior to the change. Interestingly, 1997 and 1998 was the only two-year period during the previous five years that would have been sufficient to allow the new equipment to net out of PSD review. The company suggested that its recent merger and downturn in farm implement sales were sufficient cause to select a different baseline period. The permit record included a note indicating that NDEQ agreed that merger and layoffs could be factors in selecting an alternate baseline period, but otherwise provided no basis for this conclusion.

Contrary to the position expressed by the company and affirmed by NDEQ, EPA has taken the long-standing position that reduced capacity as a result of a downturn in demand is not cause for selecting a different two-year baseline period. For example, in its August 11, 1992, Cyprus Mining determination [see http://www.epa.gov/Region7/programs/artd/air/nsr/nsrmemos/cyprus.pdf], EPA

concluded that selection of a different baseline period should not be used unless there is some catastrophic or extraordinary occurrence such as a strike or major industrial accident. Further, EPA's 1990 Draft NSR Workshop Manual [see http://www.epa.gov/Region7/programs/artd/air/nsr/nsrmemos/1990wman.pdf], notes that "in certain limited situations where the applicant adequately demonstrates that the prior two years is not representative of normal source operation, a different two year time period may be used upon a determination by the reviewing agency that it is more representative of normal source operation. Normal source operations may be affected by strikes, retooling, major industrial accidents and other catastrophic occurrences." While EPA acknowledges that retooling could provide the basis for selection of another baseline period, this was not the criterion used by either the company or NDEQ.

In summary, we recommend that NDEQ consult with EPA Region 7 for available guidance when attempting to use criteria that may be precedent setting or not otherwise provided for in prior determinations. In this case, the region would have likely advised that the two year period ultimately used in the netting analysis was the least supportable given that the prior four years showed substantially reduced emissions at the plant. As a consequence, the project would have likely had to undergo PSD review. EPA retains its option to investigate further and take action as appropriate on this matter.

Recommendations for Improvement

- Do not allow construction of sources before permits are issued by not issuing variances and not allowing the construction of items related to emission units.
- Input BACT decisions into RACT/BACT/LAER Clearing house.
- Do not default to 12-month PTE limits.
- Improve description of approved equipment in construction permits with more details of size, manufacturer, and model when available.

Commendable Practices

- Detailed fact sheets.
- Spanish and English public notices.
- Team permit reviews

Appendices

Appendix A - Source List

Facility Number	Company Name and Location	Reviewer
1949	Alliance Municipal Power Plant	Dan Rodriquez
36747	Armstrong Cabinets, Auburn	Harriett Jones
38724	Behlen Mfg., Columbus	Ward Burns
57902	Cargill Inc., Blair	Harriett Jones
69585	Cargill Dow LLC, Blair	Harriett Jones
38723	Columbus Hydraulics Co., Columbus	Ward Burns
54712	C. W. Burdick Generating Station, Grand Island	Dan Rodriguez
63861	Even-Temp, Inc., Loomis	Gary Schlicht
6272	Excel Corp	Ward Burns
40819	Farmland Foods, Crete	Dan Rodriguez
63898	Fiberglass Products, Inc., Hastings	Ward Burns
9147	Fremont Area Medical Center, Fremont	Ward Burns
71879	Golden Spread Redi-Mix	Harriett Jones
24361	Grand Island Accessories, Grand Island	Harriett Jones
47178	Great Dane Trailers	Jon Knodel
75072	Hastings HVAC, Inc., Hastings	Gary Schlicht
73356	Husker Ag Processing LLC, Plainview	Jon Knodel
75073	KAAPA Ethanol, Axtell	Jon Knodel
46695	Kelly Ryan Equipment, Blair	Gary Schlicht
56628	KMIGT - Big Springs Compressor Station	Dan Rodriguez
48518	Lon D. Wright Power Plant, Fremont	Jon Knodel
58165	N. R. Hamm Quarry, Inc.	Dan Rodriguez
37388	Nebraska City Utilities, Nebraska City	Dan Rodriguez
24371	New Holland, Grand Island	Jon Knodel
35548	Nucor Vulcract, Norfolk	Dan Rodriguez
58390	Offutt AFB, Bellevue	Ward Burns

73836	OMNI Engineering, Omaha	Ward Burns
64258	PGLA-1 Company, Blair	Gary Schlicht
74011	Plains Produce LLC, Minden	Gary Schlicht
56708	Pony Express Greenhouse LLC, Gothenburg	Harriett Jones
72834	Progress Rail Services	Harriett Jones
7338	Siouxland Concrete Company	Dan Rodriguez
58815	Spalding Light and Power	Jon Knodel
24352	Swift, Grand Island	Dan Rodriguez
78323	Trenton Agri-Products, LLC	Ward d Burns B
57476	Valmont Industries	Dan Rodriguez
62593	Waste Management of Nebraska/Douglas County RDF, Bennington	Ward Burns
42851	WEBCO Printing, Omaha	Gary Schlicht

Appendix B - Interview Questions

Questionnaire for Review of Air Permit Programs

R: 6/01

Dept: _____ Date: __/__/__

Interviewee(s): _____ [for program(s): ☐ construction ☐ operating ☐ NSPS/NESHAP ☐ other: _____]

Interviewer(s): _____

NOTE: Where the generic term "permitting" is used or for generic questions, provide separate responses re: construction permitting and re: operating permitting if a single response would not be applicable to both.

GENERAL INFORMATION

a. Estimate the number of new source construction permits issued annually by the dept for the following permit types:

____ Major (e.g., PSD, CAA/Part D)
____ Minor (non-synthetic; i.e., true minors)
____ Synthetic Minor
____ Other (i.e.,: _____)
____ Total Permits

Estimate the number of NSPS/NESHAP applicability/ nonapplicability determinations issued annually by the dept:

____ NSPS
____ NESHAP

h. Estimated the number of FESOP permits issued annually by the dept for the following permit types:

_____ Synthetic Minor
_____ Natural/True Minor

c. Is there a fee system for non-Title V permits? If YES, explain.

9. Does the dept have a system for tracking permits? If YES, list the information the system includes. [or attach a sample printout]

DISCOVERY SYSTEM

The dept should have evolved a comprehensive system for learning of a source's intention to build and for informing owner/ operators of the need for preconstruction and/or pre-operational permits. The indicator of problems regarding these matters would be the discovery of sources not having required permits [i.e., "as-built" units/processes/sources].

a. What is the system for informing sources (existing and incoming) of the possible need for permits?

b. What is the system for discovering non-permitted "as built" facilities?

c. For projects subject to the dept's preconstruction permitting requirement, how many receive "as-built" construction permits (on a % of total permits, annual, basis)?

APPLICABILITY/NONAPPLICABILITY DETERMINATIONS

a. Does the dept have a formal classification system that determines the intensity and nature of the permit application reviews? If YES, explain:

b. What are the major criteria for classification (e.g., capacity, estimated emissions, potential to emit, location)?

c. What are the different classification categories (e.g., PSD, NSPS, NESHAP)?

d. Is the system being used routinely? If NO, explain.

e. Are "fugitive emissions" considered in applicability/ nonapplicability determinations? If NO, explain.

Does the dept routinely require sources to document the representativeness of emission factors [e.g., AP-42 EFs] for the specific unit/process being addressed? If NO, explain.

f. Is there a mechanism for preventing or detecting the submittal of two or more permit applications by a company for modifications that would otherwise require major (PSD/NSR) review for the "overall" project? If YES, explain.

g. Does the dept routinely apply EPA issued policy/guidance when it make an applicability/nonapplicability determination? If NO, explain.

Also, must local agencies do so? If NO, explain.

How is such guidance kept [e.g., by topic, date, etc.] and how are staff members made aware of the EPA policy/guidance?

Does the dept routinely address EPA policy/guidance, as they are issued, to determine if the state's statutes/reg. allow for full implementation by the state of all provisions of the federal policy/guidance? If NO, explain.

Does the dept establish in-house policy regarding permitting issues?

If YES: How is the policy maintained/filed? How distributed to existing and in-coming staff?

Must local agencies follow such policies?

May such policy be more stringent (a) than federal <u>regulation</u> provisions? (b) than federal <u>policy</u>?

NOTE: All questions in this section, section h, relate to NSPS/NESHAP matters.

j. What procedures and resources, if any, does the staff use when making an NSPS/NESHAPS applicability/nonapplicability determination or an interpretation ... to ensure that the decision will be correct?

Is the staff aware of the terms of the current "delegation of federal authority" agreement between EPA and the dept?

Are determinations and interpretations in writing?

Does the dept complete a checklist, or equivalent, when making applicability/nonapplicability determinations? If YES, explain. [and attach samples of such checklists]

Does the dept typically pursue documentation re: statements provided by the source [e.g., original commence construction date, capacity, emission increase/decrease estimates, emission factors, reconstruction-related costs]?

Describe who typically reviews and concurs with each decision [use broad positions; e.g., legal staff, review engineer, section manager] prior to issuance.

If/when an answer/opinion is given by dept staff over the phone or at a meeting, does the dept document the answer for the file?

Are personnel of local agencies allowed to make applicability/nonapplicability determinations? If YES,

explain how/when the locals received delegated federal authority. Are the local agencies aware of this?

Does the dept make EPA aware of the dept's applicability/ nonapplicability determinations/interpretations of the rules? If YES, explain how and when.

Who signs formal [written] applicability/nonapplicability letters? Is a copy of each formal letter promptly sent to the EPA regional office?

How and when does the dept train its staff regarding applicability/nonapplicability decision-making?

Does the dept have a written decision-making procedure/ process that must be followed by staff?

When the dept contacts EPA for assistance by phone, is the discussion typically documented in the dept's files?

Does the dept set forth the "basis" for each determination/ interpretation, in writing [e.g., memo], for the files?

Does the dept understand that opinions issued by EPA/7 staff engineers, verbal or otherwise, are not determinations?

k. Are nonroutine/precedent-setting NSPS/NESHAP determinations/ interpretations discussed with and approved by EPA prior to issuance? If NO, explain.

Are such determinations sent to EPA f/inclusion in the ADI?

l. Describe a typical review of a permit application (meetings with the applicant, review of the application (what's

evaluated/verified), internal discussions/coordination, discussions with the state agency, method/documentation of discussions, public notice/hearing, review duration, etc):

[Use an attached page, if needed]

k. Are NAAQS-related impact assessments required (or performed) by the dept prior to final action on construction permit applications? If YES, briefly describe the technique(s) generally used.

Major projects:

Minor projects:

Synthetic minor projects:

l. Does the dept contact "other" state/local agencies to discuss permitting/technical issues? If YES, explain.

Are the discussions and the information gained documented in the dept's files.

m. If/when information is provided by a source or vendor over the phone or at a meeting, does the dept document the information for the file or require subsequent documentation by the source or vendor? If NO, explain.

n. Does the dept typically require construction permit applicants to document and substantiate “generalized” technical-, cost impact- or feasibility-related statements?

o. Does the dept use EPA's Applicability Determination Index System? If YES, to what extent and are findings documented in the department's files?

p. Does the dept use EPA's compilation of NSR/PSD guidance documents or EPA's web site for such information? If YES, to what extent and are findings documented in the department's files?

q. Does the dept use EPA's BACT/LAER Clearinghouse? If YES, to what extent and are findings documented in the department's files?

r. Does the dept document verbal discussions with EPA personnel?

s. Does the dept factor "environmental justice" into its permitting decisions? If EJ is not considered, explain.

RESOURCES

1. How is staff informed of Federal Register notices? Do they have access to historical FRs?

2. Does the staff have access to EPA-issued Background Information Documents(BIDs), inspection manuals, enabling documents, etc? If NO, explain?

How are BIDs for new standards obtained by the dept?

Does the dept get documents, on loan, from EPA libraries?

3. Does the staff have current CFRs?

4. Does the staff have access to EPA's TTN and ADI?

e. List general needs regarding resource materials, if any.

PERMIT ISSUANCE

a. When is a public notice and public participation required prior to issuance of permits?

Major:

Minor (non-synthetic):

Synthetic Minor:

b. What is the method for giving public notice?

c. Are construction activities allowed prior to permit issuance? If YES, under what circumstances?

Major projects:

Minor projects:

Synthetic projects:

d. Are draft permits sent to enforcement, counsel, and/or inspection personnel for review and comment?

5. What causes delays in the issuance of construction, FESOP, and Title V permits?

6. Who signs/concurs on construction and operating permits.

g. Does the department report its BACT/LAER decisions to EPA's BACT/LAER Clearinghouse? If NO, why not?

How have the inputs to the clearinghouse been made? [e.g., hard-copy forms, electronic]

COORDINATION

a. How do the local and state agencies coordinate permitting-related responsibilities?

b. How does the dept overview the Local Agency's permitting activities (e.g., review of documents sent to the dept, on-site audits)? Also, what is the frequency of such?

c. Does the Local Agency routinely send draft or final permits to the state agency for review/comment/concurrence? If YES, explain:

d. How does the Local Agency provide the state agency with information regarding its permitting activities? Frequency?

5. How do staff engineers/etc. become aware of what other staff members are reviewing, have decided/interpreted, etc.?

6. Are reviews by dept staff primarily performed on an individual or on a team basis?

7. Is there interaction with "other media" permitting programs?

EMISSION LIMITS AND PERMIT CONDITIONS

a. If a source is covered by SIP-approved and NSPS/NESHAP reqmts, does the construction permit specify only the SIP reqmts, the more restrictive reqmts, or both?

b. Does the dept have a standard list (e.g., a checklist) of items that must be addressed in every permit?

   Construction:

   Operating:

c. Do all permits contain standard and/or special operating conditions (operating hours, capacity, etc.)? If NO, what types of sources do not have special conditions?

   If permit writers establish permits using templates, are non-applicable provisions deleted to enhance readability?

d. Do all construction permits contain a description of the equipment (including but not limited to emission control effic., size/capacity, mfger, model number, ID number) being approved for installation or modification? If NO, explain.

e. Do permits contain specific malfunction-related provisions?

f. Do permits specify an averaging period for each emission limit? If NO, explain.

Are applicants required to justify the need for long-term (e.g., rolling 12-month) averaging periods? If NO, explain.

When a long-term averaging period is justified, does the permit contain a special enforcement provision applicable during the initial 12 month operating period? If NO, explain.

g. Do permits for portable sources require prior- and/or post-notification(s) of each re-location?

h. Do permits typically require an initial verification of compliance via source performance tests? If NO, explain.

If YES, do the permits set forth a testing deadline? Test procedures (e.g., run duration, runs per test) and methods?

i. Do permits typically impose requirements for demonstration of continuing compliance after the initial compliance demonstration (e.g., use of a CEM system, monitoring of operating/surrogate parameters)? If YES, explain:

j. Do permits clearly identify or specify provisions/sections of the permit not intended to be enforceable by the dept? If NO, are all provisions in permits considered enforceable by the department?

k. Does the dept make an effort to clear permits of vague, difficult to enforce/understand, provisions (e.g., are provisions drafted up with subsequent enforcement and/or inspection in mind)? If YES, explain the process used to identical such provisions.

l. Do permits typically set forth both emission limits which vary with load/production [e.g., lbs/MMBTU] and emission limits which cap emissions [e.g., lbs/hr]? If NO, explain.

m. Do permits typically reference the enabling legislative and the legal authority to issue and enforce the conditions of the permit?

n. Do permits typically specify that the permit application is a part of the permit and/or that nonsuperseded proposals in the permit application are deemed enforceable reqmts. If NO, how does the dept view proposals in the application which are not addressed by the permit?

o. Do permits typically set forth clear deadlines for commencing and for completing construction/alteration/mod? If NO, explain.

p. For each restriction/reqmt, do permits also establish associated monitoring/recordkeeping/reporting reqmts? If NO, explain.

q. Do permits typically set forth "averaging periods" for emission limits consistent with the averaging times used [or that would have been used] for dispersion modeling studies [e.g., the averaging times of the relevant NAAQSs for the pollutants being addressed]? If NO, explain.

r. Do permits routinely set forth continuous or periodic monitoring [surrogate or otherwise] reqmts? If NO, explain.

s. When compliance testing is imposed, do permits clearly specify when and under what conditions the tests must be performed and the frequency of the testing after the initial testing? If NO, explain.

t. Do permits typically define "excess emissions", require reporting of such and specify actions which must be taken by the owner/operator? If NO, explain.

AIR QUALITY IMPACT

a. Is the ambient air quality impact of each new or modified source determined? If YES, by whom?

Major:

Minor:

Synthetic minor:

b. Describe the guidelines used to determine if a project's air quality impacts must/should be checked?

c. Which dispersion models are used?

Does the dept assess air quality impact via something other than project-specific dispersion modeling studies? If YES, explain the procedure and explain how it was established.

d. Is the source required to do needed dispersion modeling?

If YES, is the source's modeling studies and input values also validated/verified by the department?

e. Are the following routinely considered?

____ fugitive emissions
____ nearby structure influences on dispersion
____ GEP stack height
____ ambient air locations at the plant site
____ surrounding terrain
____ effects of emissions on visibility

f. Is the actual, average, allowable or maximum emission rate modeled?

NAAQS modeling:

Increment modeling:

g. What operating conditions for the source are modeled? Average, representative, anticipated or maximum (worst-case)?

NAAQS modeling:

Increment modeling:

h. Is the emission limit in the permit and the emissions used for modeling ever allowed to be different? If YES, under what conditions?

i. What met data is required (e.g., nearest, representative, national weather service data, latest 5 years)?

PERMITTING STAFF AND DUTIES

a. Is the staff organized by area of responsibilities such as industrial source category, type of permit to be issued (e.g., major, minor, synthetic minor, NSPS Subpart)? If YES, explain.

b. Are private sector consultants hired by the department to assist in performing permitting activities? If YES, explain in terms of source type, percentage of overall permitting, short/long-term, etc:

c. If staff turnover is considered high by the department, what actions are being considered to retain desired individuals?

d. Are all the positions filled? If NO, which positions are not filled and is the dept attempting to fill these positions?

e. How much air permitting experience do staff members have?

__ < 1 yr; __ 1-2 yrs; __ 2-5 yrs; __ 5-10 yrs; __ **> 10 yrs**

TRAINING OF PERMITTING STAFF

a. Does the dept have a set plan for the training of new staff? If YES, explain:

b. What type training is provided by the state agency for Local Agency personnel; and, what is the frequency of said training?

c. What type training does the dept need or desire?

Immediate:

Long Term:

d. Have permit staff been required to do field work to become familiar with sources/operations?

e. General Comments:

ANTICIPATED CHANGES TO THE PERMITTING PROGRAM

Staff:

Organization:

NSR Rules/Regulations:

Training:

Operating Permits:

Other:

MISCELLANEOUS

Provide permitting/NSPS/NESHAP-related comments/complaints/etc. which the dept wants to bring to EPA/7's attention for possible future discussion; regarding general issues.

1.

2.

3.

4.

DR Disk: srp2b; Filename: preview3b.wpd [UpDated: 6/13/01]

Appendix C - Flow Charts

Appendix D - News Release

APPENDIX E - CHECKLISTS

SECTION IV - TITLE V FEE REVIEW

The purpose of the Title V Fee Review was to assure that the NDEQ was collecting adequate fees and accounting for the direct and indirect costs associated with Title V and Non-Title V activities according to EPA Regulations and requirements.

The EPA initiated the Title V Fee review by submitting a set of questions to the NDEQ, concerning the Title V fee revenue, expenditures, and the accounting system. The Nebraska Air program provided a detail response to the questions prior to the Title V fee review. In order to clarify some of the initial responses, some follow up questions were given to the NDEQ to answer during the on-site review. (See Attachments)

The NDEQ uses an Emission Inventory (EI) form to calculate and collect an annual emission fee from major sources of air pollution. Each major source pays an emission fee for regulated pollutants. The current fee is $50.00 per ton. The fee receipts are tracked by the source identification number using the Integrated Information System (IIS).

The NDEQ staff tracks their time through the use of electronic timesheets that use program codes to differentiate between Title V and Non-Title V activities. To assist the employee in this process NDEQ has drafted a Timesheet Coding Guidance document. The NDEQ Air Program has a total of 36.15 total FTEs. Currently, Title V dollars fund 22.46 FTEs.

The reporting of Title V and Non-Title V funds and activities are reviewed by the NDEQ managers on a monthly basis in order to make any needed adjustments during the year. By tracking the revenues and expenditures, along with projections for the coming year, the NDEQ adjusts the per ton yearly fee in order to meet its funding needs.

In an effort to integrate business processes and systems Nebraska has developed the Nebraska Information System(NIS). The NIS will replace the state's current central financial, payroll, budget and inventory systems. The goal of NIS is to improve the quality and accessibility of information, reduce redundant date entry, storage and processing, enable e-government, and eliminate duplicate administrative systems.

The overall finding is that the NDEQ has implemented the Title V Fee program well. The program is very well documented, and there is excellent communication within and across the program. The NDEQ seems to be collecting sufficient fees, and accounting for the direct and indirect costs associated with administering the Title V program in conjunction with the Non-Title V activities.

SECTION V - OVERVIEW OF THE NEBRASKA AIR TOXIC PROGRAM

During the onsite visit 14 files were reviewed. A summary of each file is attached in appendix of this report. The files were reviewed for recent inspections and MACT related documents. If a MACT inspection was performed in the last few years, the inspection was evaluated. The evaluation consisted of checking the inspection report for listing the MACT as an applicable requirement, listing the monitoring requirements used to demonstrate compliance with the MACT standard, and assurance that the source monitored as prescribed by the applicable standard.

Adoption Notification & Tracking

Nebraska adopts the MACT standards by reference in Title 129 Nebraska Air Quality Regulations, Chapter 28 - HAZARDOUS AIR POLLUTANT; EMISSIONS STANDARDS. The initial notifications are tracked in a spreadsheet. Plans are to enter this data into Nebraska's IIS data system when the capability to enter the data exists. As a compliance date approaches, the inspectors are informed of the regulation. A MACT notebook has been developed for the Nebraska personnel having any responsibility for MACT implementation and compliance. Starting this spring inspector training is to be offered to Nebraska personnel.

Inspections

Nebraska's inspectors are assigned to inspect sources in a particular region of the state. The inspectors are sent a list of sources at the beginning of the year and have to schedule their inspections during the year. During the inspection they are responsible for inspecting for compliance with the MACT. The inspection report is submitted to the Compliance Section Supervisor within one week if a violation was discovered and within two weeks if no violation was discovered. During the onsite review of the inspection reports it was apparent that the inspectors check for compliance with the MACT.

Compliance

The Compliance Section Supervisor reviews the inspection report and the source is sent a copy of the inspection report. The Compliance Section Supervisor recommends an appropriate response for each inspection.

SUMMARY OF FINDINGS

At the completion of the onsite visit an exit meeting was held on February 24, 2003. The highlights of the more significant issues were discussed. Overall the NDEQ program is tracking and inspecting for compliance most of the MACT sources regulated by the State of Nebraska. Tracking of the MACT sources was complete and through and in addition Nebraska knew the universe of MACT sources and their compliance dates. Inspections detailed compliance with the MACT standard. When a source chose to reduce their emissions below the 10/25 ton cutoff, the

operating parameters were checked to assure compliance with this limit. Although the State of Nebraska has a list of dry cleaners they have not performed any inspections to date. They plan to add area sources to the inspection targeting system next year.

RECOMMENDATIONS

The state needs to add the MACT sources to its compliance monitoring strategy as they had planned.

Chapter III. Nebraska Ambient Air Monitoring Program Technical System Audit

Douglas County Health Department

Preliminary Report of Findings
Nebraska Ambient Air Monitoring Program
Technical System Audit

EPA Region VII
August 2003

Thien Bui
James Regehr
Michael F. Davis

Background:

The Nebraska Department of Environmental Quality (NDEQ) is responsible for conducting and oversight of the ambient air monitoring program in the State of Nebraska. The monitoring network is to be operated in accordance with the requirements of 40 CFR Parts 50, 53, 58, and referenced guidance and technical support documents**.** The Nebraska air monitoring program consists of a network operated by three separate agencies as follows. NDEQ currently operates PM_{10} monitors in Cass County and four additional $PM_{2.5}$ monitors in Grand Island, Scottsbluff, Weeping Water and North Platte, in addition, two IMPROVE monitors are in operation in Oshkosh and Halsey. Lincoln-Lancaster County Health Department operates one $PM_{2.5}$, one carbon monoxide and one ozone monitoring location. Douglas County Health Department operates three $PM_{2.5}$ sites in the city of Omaha, in addition they operate sites in Blair and Bellevue, Nebraska. Douglas County also operates four PM_{10} monitors and three ozone monitors. This network is designed in accordance with EPA regulations and is reviewed annually by the State. In addition, NDEQ operates a network of Total Reduced Sulfur (TRS) analyzers to assess TRS levels in accordance with the State's ambient air quality standard. The focus of this audit is on the monitoring systems employed as part of the SLAMS network, therefore, the State TRS network was not assessed.

This preliminary report focuses solely upon the audit findings from an on-site assessment of monitoring network performance and maintenance practices by the Douglas County Health Department. Assessment of the remainder of the Nebraska ambient air monitoring network is currently ongoing and the results will be appended to this report.

Douglas County Health Department Audit Results; Observations & Discrepancies

On July 08 through July 10, 2003, Thien Bui and James Regehr met with Chitta Ghosh, Jerry Snyder, Margaret Finney and Ross Gibilisco of the Douglas County Health Department to conduct audits on selected ambient air monitoring sites as part of the newly revised National Performance Audit Program (NPAP) being piloted by Region VII. A follow-up visit was conducted with the Douglas County Health Department staff by Thien Bui, James Regehr, and Michael F. Davis on July 23-24 to verify on site documentation and monitoring practice. The NPAP audits differ in practice from previous audits because entire sample train is tested with known concentrations of gaseous standards. Previously, ambient air monitoring station audits were conducted by connecting the performance audit device directly to the back of the instrument being audited and known concentrations were introduced, thus by passing the sampler's inlet probe. The new NPAP audit system allows us to connect directly to the end of the intake line which draws air from the ambient environment to the back of the analyzer. This allows us to test the intake system as well as the actual analyzer.

In addition to fulfilling NDEQ's requirement for NPAP participation, these audits will also serve as a portion of the on-site assessments to be conducted across the state of Nebraska as part of Region VII's technical system audit of the Nebraska Department of Environmental Quality. In addition to monitor performance, siting criteria was also evaluated at each location.

Audits were conducted at the following sites in Douglas County:

Site Name	AQS I.D.	Pollutant
11414 N. 72nd	31-055-0032	Ozone
30th & Fort	31-055-0035	Ozone & Carbon Monoxide
2411 "O" St.	31-055-0028	Ozone
1616 Whitmore	31-055-0053	Sulfur Dioxide
7425 W. Dodge Rd.	31-055-0037	Carbon Monoxide
7717 W. Dodge Rd.	31-055-0040	PM 10
28th 7 Reynolds	31-055-0050	Sulfur Dioxide
19th & Burt	31-055-0054	PM 10 Collocated
9225 Berry	31-055-0052	PM 2.5 Collocated

The numerical results of the particulate matter audits will be calculated and included in the final systems audit report. With the exception of the ozone analyzer at 2411 "O" St., all of the gaseous analyzers were within the 15% audit requirements when audited through the rear of the instrument..

There was, however, a much lower rate of success when the sites were audited through the probe. The condition of the sample inlet lines are not routinely checked. This was obvious by our inspection of the lines and was also made known to us by the site operators. Condition of the lines ranged from being dirty at the tip, to containing moisture, to being clogged at the tip and in one instance completely broken into two pieces. The line which was broken in two pieces ran through a piece of conduit so the break was not obvious until the audit gas was introduced into the end of the sample line. These are critical finding because, under normal operating conditions, the sampler pulls ambient air through the sample line into the back of the analyzer. If the sample line is compromised, so is the sample and the resultant air monitoring data.

Procedures are now in place to check, clean and replace if necessary all intake sampling lines on an annual basis. Russ Haden, the new Quality Assurance Officer will perform this function. These procedures are also included in the monitoring standard operation procedure.

Log books are not being maintained at each of the sites, therefore, there is no defensible record of site visits and or instrument adjustments. A log book must be maintained at each site and each visit, along with any work performed at the site, must be recorded. This record provides direct linkage and chain of evidence for defense of ambient air monitoring results in the event of measurement of an exceedance or an exceptional event. These logbooks should be kept at the site for a specified amount of time (i.e. 1 year) and then archived back at the central office. Even through Mr. Ghosh maintains a central laboratory log of the precision and span checks, calibrations, and audits, a field site log book still must be maintained for each site.

Currently, spiral bound notebooks are in place at all monitoring sites. Water proof, page numbered notebooks are being ordered to replace the spiral bound notebooks at all monitoring stations.

Three of the six gaseous pollutant sites audited contained air conditioners that were not functioning, not functioning properly, or did not have a method of cooling the space at all. Sites with gaseous analyzers need to be temperature controlled and continuously monitored with some type of temperature data recording device to document that the equipment is operating within temperature specifications.

All sites that needed air conditioning will have air conditioners installed by April 1, 2004. The 74th & Dodge site will have duct work installed to route cool / warm air to the room in which the analyzer is located. All sites now have continuous temperature recording devices installed.

The Douglas County maintenance department is being called out to the to perform trivial tasks which the sight operator should be able to perform on their own. Douglas County Health Department does not have a ladder available to the site operators. Therefore, when work needs to be performed on the roof of a sampling trailer, on a probe which sticks out from the side of a building, or any elevated position, the County Maintenance Department has to be called out to provide a ladder and do the work. County Maintenance has been called out to install window air conditioning units, replace sample lines and untie knots in ropes. The County Health Department site operators should have the ability to perform all of these simple field tasks.

A ladder will be purchased by Douglas County Health Department.

Douglas County Health Department Site Specific Audit Results:

A detailed audit review by monitoring site is listed below. This review consists of the actual audit results, the ability of the site to meet siting criteria and any discrepancies noted at the site.

11414 North 72nd: Site Operator: Jerry Snyder
Ozone:

1. Window air conditioner unit is not working and there is no method of controlling ambient temperature in the room where the ozone monitor is located. A new window air conditioner unit was on site ready to be installed. A request was going to be submitted to Douglas County Maintenance to remove the old unit and install the new one.
2. End of sample line was clean.
3. Audit was conducted through the probe with acceptable results.
4. Site meets siting criteria as set forth in 40 CFR Part 58 Appendix E.

A window air conditioning unit will be install by April 1, 2004, the beginning of ozone season. The intake sampling line will be replace with new teflon tubing.

30th & Fort: Site Operator: Jerry Snyder
Ozone:

1. End of sample line was dirty with a few spider webs and or cottonwood tree seeds at the tip. Approximately 1 inch of sample line was removed so as not to force the dirty material into the sampler.
2. Sample concentrations at the analyzer monitor were much lower than were being introduced from the audit trailer. All connections were checked and no leaks were found.

The sample line at the site was removed from the conduit tubing which houses it outside the building. The sample line was found to be completely severed at one location and had two large holes in other locations.

3. Extra tubing was not available on site, and thus the audit was conducted through the back of the analyzer and the results were acceptable.

The sampling intake line has been replaced with teflon tubing. The teflon tubing was installed in October 2003.

Carbon Monoxide:

1. The end of the inlet tubing was completely clogged with dirt and what appeared to be cottonwood tree seeds. Approximately 1 ½ inches of tubing were removed to ensure the line was clear of debris.
2. The audit was then conducted through the probe and the results were acceptable.
3. The window air conditioner unit at this site was functioning but was not cooling well.
4. Site meets siting criteria as set forth in 40 CFR Part 58 Appendix E.

New teflon tubing was installed as the intake sampling line in October 2003.

2411 "O" Street: Site Operator: Jerry Snyder

Ozone:

1. Arrived at site to find water in the sampling line as well as in the ozone analyzer. The values being reported by the analyzer were inaccurate and bouncing sporadically. Due to these conditions, we could not conduct and audit at this site.
2. Currently the probe for this site is located on the side of a building. This only allows 180 degrees of airflow. Although this site does meet minimal siting criteria requirements according to CFR Part 58 Appendix E it would be more appropriate and representative of local conditions to locate the probe atop the roof of the building to obtain 360 degrees of air flow.

A funnel will be installed on the tip of the intake line to alleviate the problem of moisture becoming entrained in the sample line during rain events. Relocating the intake probe from the side of the building to the roof will be considered by DCHD.

1616 Whitmore: Site Operator: Margaret Finney

Sulfur Dioxide:

1. The site operator informed us that the results of the last internal audit she conducted at this site revealed the analyzer to be reading approximately 12% low. Our results reveal the analyzer to read approximately 13% low over the range.
2. The end of the sample line appeared to be clean however, when 400ppb of SO2 was introduced through the sample line the analyzer continued to read zero. Upon inspection by EPA staff, the sample line was found to have water in it inside the shelter.
3. The window air conditioning unit inside the trailer was blowing directly on the sample line as it entered the trailer. The air flow louvers on the air conditioner had been broken and there was no way of diverting the airflow away from the line. Humid air being drawn into the shelter had condensed and water had beaded up inside the sample line.

We suggested replacing the tubing and diverting the air flow, from the air conditioner, away from the sample line as well as insulating the sample line inside the trailer.

4. The site operator said they would have to call Douglas County Maintenance to replace the line as their air monitoring group didn't have a ladder and couldn't check the conduit pipe through which the sample line ran. The site operator informed us that she had removed and examined the line several times due to the fact that it had water in it. The same line would be dried out and put back in place.
5. The trailer in which this analyzer is located leaks during rain storms. The site operator informed us that water pools on the table on which the analyzer is located. This is detrimental to the analyzer as well as potentially hazardous to the site operator.
6. The inlet line at this site is 0.76 meters above the top of the shelter. Siting criteria in 40 CFR Part 58 Appendix E, requires the probe to be > 1 meter from the supporting structure.

This analyzer has been recalibrated. New teflon tubing has been installed and insulated to alleviated the condensation problem. A work order will be place into the County to have the water leak repaired. The inlet probe has been raised to ≥ 1 meter above the roof of the shelter and now complies with siting criteria.

7425 W. Dodge Road: Site Operator: Ross Gibilisco

Carbon Monoxide:

1. The sample line at this site is constructed of ½" PVC tubing which is connected to a manifold by a short piece of tygon tubing and then vacuum blower motor. As carbon monoxide is a non reactive gas, the CFR does not establish specific probe material requirements. It is preferred that all ambient air monitoring be performed through probes constructed on non-reactive materials, it is assumed that PVC is an acceptable intake material for carbon monoxide sampling only at this site..
2. The end of the sampling line was unaccessible with the audit trailer so the audit had to be conducted through the back of the analyzer.
3. PVC tubing is opaque which rendered us unable to determine the cleanliness of the intake line. Douglas County must periodically inspect the interior of this probe to verify unobstructed air flow and cleanliness.
4. The room where the analyzer is located has no method of temperature control and temperatures become elevated in the summer.
5. The intake line is extremely long and residence time needs to be less than or equal to 20 seconds. At the time of this audit we did not have the appropriate equipment to document the flow rate.
6. Site meets siting criteria as set forth in 40 CFR Part 58 Appendix E.

Intake lines will be cleaned and checked for leaks on an annual basis. A continuous temperature recording device has been installed.

7717 Dodge Road: Site Operator: Ross Gibilisco

PM10:

1. Data from the audit will be calculated to determine audit results and included in the final systems audit report.

2. Site meets siting criteria as set forth in 40 CFR Part 58 Appendix E.

28th & Reynolds: Site Operator: Margaret Finney
Sulfur Dioxide:

1. Upon arriving at this site, the site operator informed us that the results of the last internal audit she conducted at this site revealed the analyzer to be reading approximately 12% low. After the her internal audit, no actions had been taken to correct this problem.
2. The tip of the probe was dirty and approximately one inch of tubing was removed.
3. Our audit revealed the analyzer to read approximately 13% low over the range.
4. According to the last certification date on the VICI Metronics Dynacalibrator, it was overdue for certification. It should have been re-certified in January of 2003.
5. Siting criteria evaluation for this site needs to be conducted.

This monitor has been recalibrated. The VICI Metronics Dynacalibrator was recertified in October 2003. The tip of the inlet sampling line will be checked for debris every three months by DCHD.

19th & Burt: Site Operator: Margaret Finney
PM 10:

1. Data from the audit will be calculated to determine audit results and included in the final systems audit report.
2. Siting criteria evaluation for this site needs to be conducted

9225 Berry: Site Operator: Jerry Snyder
PM 2.5:

1. Audit results were acceptable
2. Site meets siting criteria as set forth in 40 CFR Part 58 Appendix E.

Douglas County Health Department Required Corrective Actions:

1. The operating temperature range of most air pollution analyzers without experiencing excessive drifts are from 20C to 30C. A continuous temperature recorder is recommended for all ambient air monitoring sites with continuous monitors. (Reference: Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part 1, Ambient Air Quality Monitoring Program Quality System Development, EPA-454-R-98-004, August 1998, Section 7.1).
DCHD has purchased and installed continuous temperature recording devices at all monitoring sites with the exception of the ozone stations which will be done by April 1, 2004 when ozone season begins.

2. For the reactive gases, SO2, NO2 and Ozone, only Pyrex glass and Teflon are acceptable materials for use as intake sampling lines. All sampling lines for reactive gases shall be changed to either Pyrex glass or Teflon. (Reference: 40 CFR Part 58, App. E).

DCHD has purchased and installed teflon tubing in all the monitoring stations.

3. All sampling lines shall be checked for cracks, debris, or any other defects on an annual basis or more frequently as needed. Sampling line inspections shall be recorded in the site log book.

Procedures for inspecting and cleaning sampling lines on an annual basis or more frequently if needed is being developed and included in the DCHD monitoring SOP.

4. Precision checks on the CO monitor at 30th & Fort were performed at 7.78 ppm. Precision checks shall be performed within the range of 8- 10 ppm. (Reference: Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part 1, Ambient Air Quality Monitoring Program Quality System Development, EPA-454-R-98-004, August 1998, Section 12.3).

Precision gases are being diluted in the correct precision range.

5. An internal audit of the SO2 monitor at 28th & Reynolds site showed a 12% bias yet no corrective action was performed. Corrective action procedures must be written and adopted for audits, precision checks, span and zero checks.

Corrective action procedures are being developed and will be included in the DCHD monitoring SOP.

6. For all pollutants: Performance audits should be done by an independent person who does not operate or conduct routine monitoring, calibration, and analysis. The audit equipment should also be independent of the field equipment used for routine monitoring, calibration, and analysis by the site operator. (Reference: 40 CFR Part 58, App. A).

Russ Hayden will begin to perform indepedent performance on all criteria pollutant monitoring. EPA will assist in training Russ on good QA procedures. PM2.5 and PM10 auditing have already been performed by Russ.

7. The VICI Metronics Dynacalibrator model 230, Serial number MU-459 was due for recertification on January 8, 2003. Out of certification calibration equipment shall not be used.

The VICI Metronic Dyanacalibrator model 230, serial number MU-459 was recertified in October 2003.

8. The CO monitor at 74th & Dodge was 7 months overdue for a calibration. All monitors shall be calibrated on a semi-annual basis as stated in the Douglas County Health Department Standard Operating Procedures.

The calibration was performed but the information was not recorded on the correct form. This has been corrected. A calibration schedule is being developed to ensure calibrations and maintenance are performed on time.

9. A unique log book must be developed and maintained at each monitoring site. All logbook entries must be made in chronological order.

All sites are equipped with logbooks.

10. Maintenance records for each individual piece of equipment must be established. On-site maintenance activities must be recorded in the site logbook. All maintenance records should be kept with the individual piece equipment.

All maintenance records are being recorded on site in a unique logbook for that site. Entry will also be made on maintenance log sheets which are to be kept with each individual piece of equipment.

11. An inlet line was observed by EPA staff at 16th & Whitmore to be leaking at the rear of the monitoring instrument. Upon investigation, the line had a ferrule installed backward without a supporting ring, making it impossible to obtain a gas-tight seal. Training on all aspects of air monitoring shall be provided for personnel. Records on personnel qualifications and training should be maintained and should be accessible for review during audit activities. (Reference: Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part 1, Ambient Air Quality Monitoring Program Quality System Development, EPA-454-R-98-004, August 1998, Section 4).

The ferrule was installed on correctly. Training records will be kept for all audit reviews.

12. Moisture was observed in the sampling line at both 16th & Whitmore and 24 & O. Corrective measures should be taken to prevent this from happening in the future.

A funnel was installed on the tip of the sampling line at the 25th & O site as well as the 16th & Whitmore site. The intake line at 16th and Whitmore has also been insulated to alleviate moisture in the line from condensation.

13. The solid chemical scrubber materials in the zero air system at 16th & Whitmore have not been replaced or checked for at least 5 years. Preventive maintenance schedules for all air monitoring equipment must be developed and followed.

Only the charcoal was replaced. A drierite canister in series with the charcoal, to remove moisture, was recommended. This will be done as soon as possible.

14. Standard Operating Procedures for the operation of all criteria pollutants need to be reviewed and revised to describe in detail the method for operation, analysis, or action with thoroughly prescribed techniques and steps for performing certain routine tasks. SOPs should be made available to all personnel. Personnel should be trained on SOP content and use. (Reference: Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part 1, Ambient Air Quality Monitoring Program Quality System Development, EPA-454-R-98-004, August 1998, Section 5 & 9).

Standard Operating Procedures are being developed for all aspects of monitoring. QA SOP's are also being developed.

15. Quarterly audits should be performed in the following ranges for ozone and SO2:
    (1) 0.03 - 0.08 ppm
    (2) 0.15 - .20 ppm
    (3) .35 - .45 ppm

For CO:
    (1) 3 - 8 ppm
    (2) 15 - 20 ppm
    (3) 35 - 45 ppm

The following audit ranges are being used by DCHD.

16. A multi-point calibration is considered valid when all points are within 2% of full scale of the best-fit straight line. This linearity check should be included on all calibration forms for continuous analyzers. The initial of the technician performing calibration/ precision span checks/ audit must be on the gaseous pollutant monitor Calibration-Precision/Span Check - Audit Log form. In the case of SO_2 audits, the serial number of the perm tube and the perm tube calibrator should also be on this form.

There was some confusion regarding the 2% linear regression criteria. DCHD thought this was the percent error between the known and measured values. After further discussion, DCHD understood what the linear criteria was and will implement this on their calibration forms.

17. Preventive maintenance schedules must be developed for PM10 and PM2.5 monitors to preclude loss of data. Any maintenance performed must be documented in a logbook for each monitor.

Preventive maintenance shcedules for PM2.5 and PM10 will be conducted. All preventive maintenance will be entered on unique logbooks for the site.

18. Three monthly flow checks (6/25/03, 3/17/03,12/09/02) were documented for 46th & Farnum during the system audit. There were no other flow checks documented. Flow checks must be performed monthly and documented.

All monthly flow checks were observed to have been conducted since the August audit.

19. A portable barometric pressure sensor traceable to a NIST primary standard should be used to record pressure readings on-site at the monitoring location prior to performing calibration of PM10 and PM2.5 monitors.

A NIST primary standard and portable NIST traceable pressure standards are being ordered for DCHD.

20. A calibration on the PM2.5 monitor at 41st & Woolworth was performed on 8/13/02. A failed external and internal leak check was recorded on the calibration log but no corrective action was documented. No follow up calibration was performed. After any failed quality

assurance check/calibration, corrective action must be performed and followed by a QA check/calibration. All QA checks must be successful before the monitor is deemed ready to sample. All corrective actions and QA assessments must be documented.

Corrective actions are now incorporated into SOP's and the QA officer will make sure all calibrations and QC checks are valid.

21. There were multiple failed audits documented in the files but no corrective action, follow up quality assurance checks, or equipment recalibrations performed. Corrective action procedures must be implemented for a failed audit or QC check on the PM2.5 monitor. (Reference: Quality Assurance Guidance Document 2.12, Monitoring PM2.5 in Ambient Air Using Designated Reference or Class I Equivalent Methods, November 1998).

Corrective actions are now incorporated into SOP's and the QA officer will make sure all calibrations and QC checks are valid.

22. There were no flow verifications documented for the 41st & Woolworth PM2.5 monitor from July 30, 2002 to April 20, 2003. Verification of the temperature sensors, pressure sensors, mass flow controller, and leak checks should be performed monthly and documented.(Reference: Quality Assurance Guidance Document 2.12, Monitoring PM2.5 in Ambient Air Using Designated Reference or Class I Equivalent Methods, November 1998).

Monthly verifications were observed for 41st & Woolworth PM2.5 sites. All forms are being filled out.

23. There were multiple audit forms and monthly verification forms for PM2.5 monitors which were not fully filled out. There were multiple forms without leak checks recorded. All field quality assurance forms must be fully filled in with complete information. If a section is not applicable then N/A is an appropriate notation for that particular section.

All monthly verifications and audit forms were observed to have been filled out with complete information since the August system audit.

24. There was only one documented monthly verification on the PM2.5 speciation monitor at 41st & Woolworth. These verifications must be performed and documented monthly. All information on the monthly verification form shall be recorded and all flow measurements calculated and recorded appropriately on the documentation.

All monthly verifications for the PM2.5 speciation monitor have been conducted with all flow measurements calculated and the forms filled out completely since the August system audit.

25. There were multiple PM2.5 chain of custody forms that were not filled out by the field personnel at the time of filter installation. There are no records of who installed the filters in the field. Chain of custody forms must be filled out completely by each individual who handles the filter.

Chain of custody forms were observed to be completely filled out. Laboratory staff will not accept any forms which are not completely filled out.

26. Compressed gas certification procedures need to be updated. EPA recommends following the guidance outline in the document entitled "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (Revised September 1993)".

EPA will forward the EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (Revised September 1993) to be used as the method for gas certification.

27. County Health Department monitor siting criteria assessment documentation is either not current or non-existent for their current monitoring network.

Russ Haden will perform this task.

Follow up assessment:

A final on-site follow up assessment will be performed jointly by EPA and NDEQ in March-April 2004 to verify and validate the completeness of monitor site improvements. Specifically, probe material replacement, temperature control, and on-site record keeping will be assessed in addition to random instrument calibration verifications.